

Panasonic

Video Teleconferencing System

Codec

Model No. **KXC-M7800**

OPERATING INSTRUCTIONS



The camera is in the other package.

Please read Operating Instructions before using the unit and save them for future reference.

Introduction

Dial
Functions

Camera
Functions

Communication
Functions

Video
Functions

Multipoint
Functions

Utility
Functions

Miscellaneous
Information

ISU512 is the registered trademark of ADTRAN Inc. U.S.A.

NetMeeting is the registered trademark of Microsoft Corporation U.S.A.

KME will not make any warranties for the following damages if they occur directly or indirectly because of your use of this product.

- Damages that have occurred during the process of connecting the telecommunication.
- Damages from the loss of customized data.

Thank you for purchasing the Panasonic “Video Teleconferencing System”.

The manuals provided with this system are :

Quick Reference Guide

The quick reference guide describes the basic operations of this system in a simplified form.

Installation Manual

The installation manual describes the method of connection for the accessories, codec, and camera.

Operating Instructions

The operating instructions describe the operations of this system and communications.

Federal Communications Commission Requirements

NOTE : This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Warning :

To assure continued FCC emission limit compliance, the user must use only the provided (1) power supply cord, (2) 1 shielded interface cable for V.35, (3) 1 shielded interface cable for RS-530, (4) 1 shielded interface cable for RS-366, (5) 2 video cables, 1 audio cable, and 1 camera control cable. All other user-provided interface cables must be shielded. Also, any unauthorized changes or modifications to this equipment will void the user's authority to operate this device.

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Introduction

Dial Functions

Camera Functions

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Important Safety Instructions

When using this unit, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons.

1. Read and understand all instructions.
2. Follow all warnings and instructions marked on the product.
3. Unplug this product from the wall outlets before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product near water, for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation, to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on the bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.
8. This product is equipped with a three wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.
9. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by people walking on it.
10. Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.

11. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
12. To reduce the risk of electric shock, do not disassemble this product, but take it to a qualified service personnel when some service or repair work is required. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect reassembly can cause electric shock when the appliance is subsequently used.
13. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - A. When the power supply cord or plug is damaged or frayed.
 - B. If liquid has been spilled into the product.
 - C. If the product has been exposed to rain or water.
 - D. If the product does not operate normally by following the operating instructions. Adjust only those controls, that are covered by the operating instructions because improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
 - E. If the product has been dropped or the cabinet has been damaged.
 - F. If the product exhibits a distinct change in performance.
14. Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.
15. Do not use this product to report a gas leak in the vicinity of the leak.

SAVE THESE INSTRUCTIONS

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS PRODUCT TO RAIN OR ANY TYPE OF MOISTURE.

CAUTION:

THE POWER SUPPLY CORD IS USED AS THE MAIN DISCONNECT DEVICE, ENSURE THAT THE SOCKET-OUTLET IS LOCATED / INSTALLED NEAR THE EQUIPMENT AND IS EASILY ACCESSIBLE.

General information

Huge features in a small package

- High quality video 30 frames per second
- New generation of Acoustic Echo Cancellation
- Product can be used in small conference room to large board rooms
- Daisy chain microphone (Up to 4 microphones)
- Dual Monitor capability (Self view or still image for 2nd monitor)
- Annex-D for graphics transmission
- Split Screen feature (horizontal/vertical) and PIP allows the user to customize the presentation
- High Speed Data transmission for data conferencing T. 120 capable
- Multifunction camera with 9 positions and a document position
- Far end camera control allows the user to view video from 5 input sources
- Chairperson control allows the user to chair meetings from any locations (H.243). External MCU or service is required

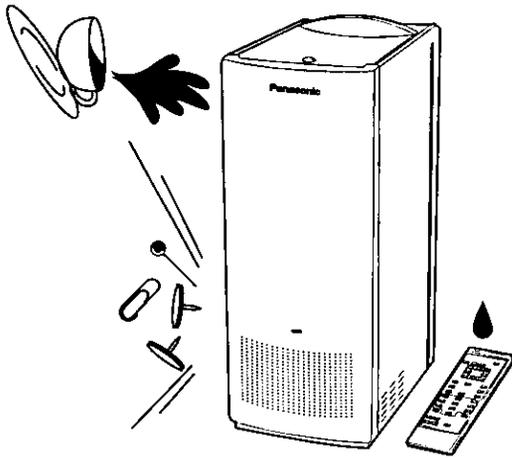
Unique Applications

- Surveillance using one way video (no audio transmission), the CODEC can be programmed to transmit or receive video from remote location
- Flexible communications using ISDN, T1 or any similar network (External I-MUX or network Interface is required, CODEC uses V.35, RS-449, RS-366 and X.21 protocols)

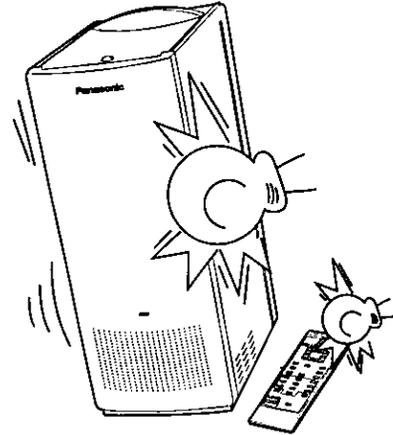
Precautions

The following precautions are recommended to extend the life of the unit.

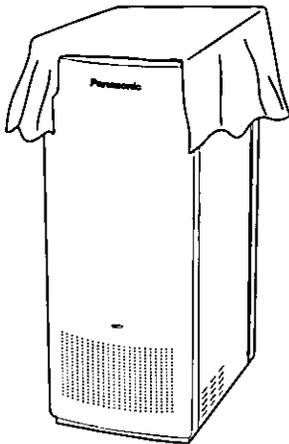
Do not allow liquids to spill into the unit. Do not insert sharp objects into the unit.



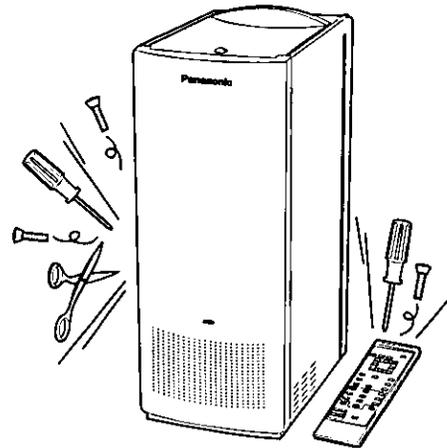
Do not shock the unit.



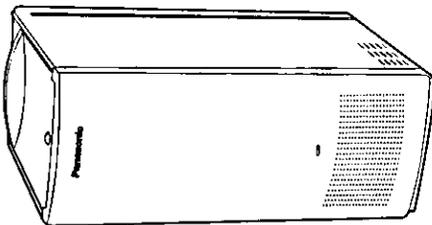
Do not place cloth or other items on top of the unit.



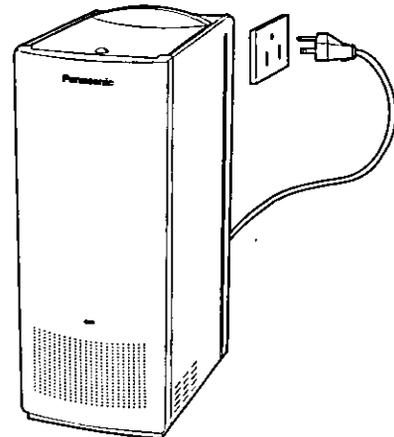
Do not disassemble the unit.



Do not turn the unit on its side.



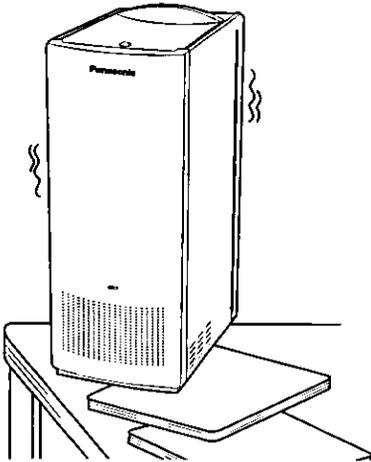
If the unit is not going to be used for an extended period, unplug the power cord.



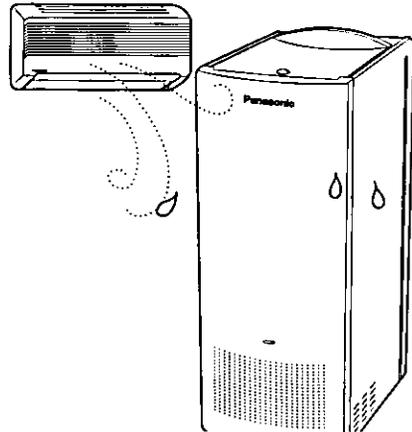
Precautions

■ Operating Environment

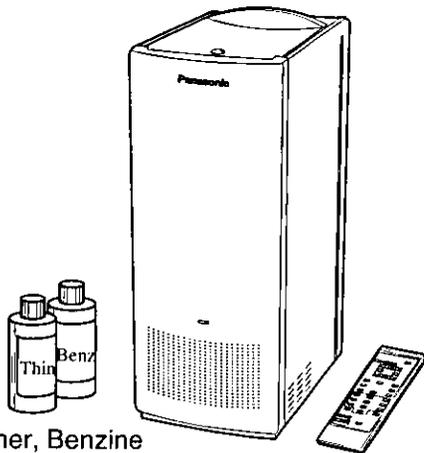
Do not place the unit on an uneven or unstable surface.



Do not place the unit near a heating appliance or an air conditioning vent. Do not place the unit in a room with extremely high or low humidity.

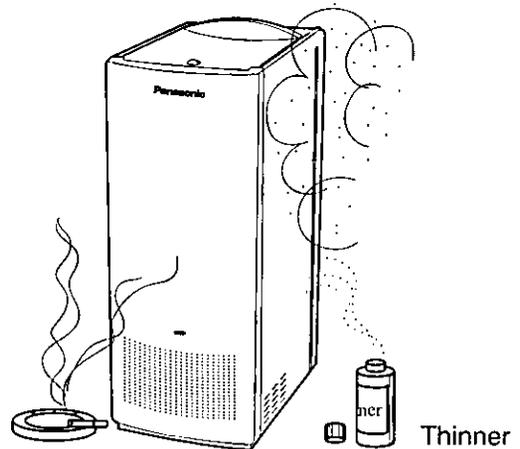


Do not wipe the unit with volatile liquids.



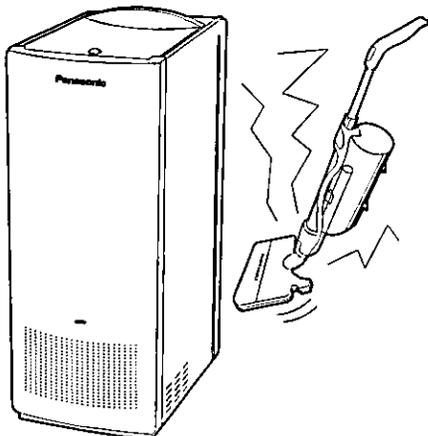
Thinner, Benzine

Do not place the unit in an area where there is a lot of smoke, dust, chemical fumes, or vibration.

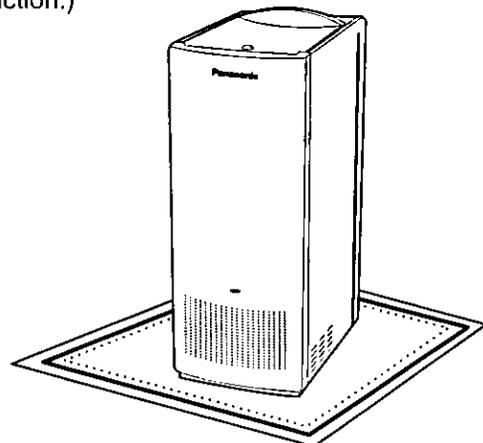


Thinner

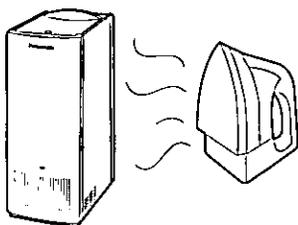
Do not place the unit near other electrical appliances such as vacuum cleaner.



Do not place the unit on a carpet.
(Static electricity may occur causing the unit to malfunction.)

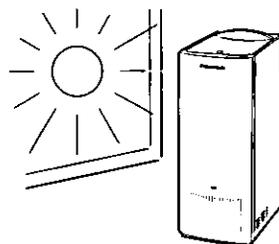


Do not use this unit near a fire or heating appliance. This can cause deformation or malfunctioning.

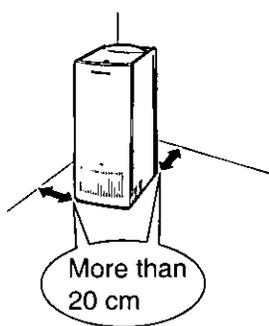


Do not place the unit in direct sunlight or near a cooling or heating (air-conditioning) unit.

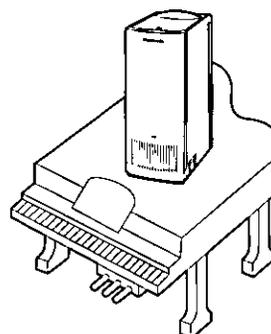
Using the unit at temperatures above 35°C or below 5°C can cause incorrect operation, deformation or malfunctioning.



Position the unit at least 20 cm away from any wall. Placing the unit closer can result in incorrect operation caused by the heat which the unit generates.



Do not place the unit on a piano, etc. This can cause cracks, scratches and discoloration.

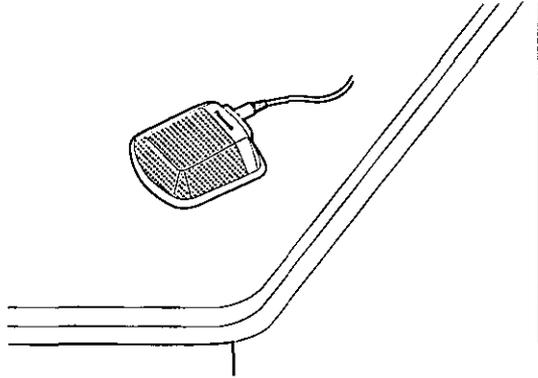


- Do not place heavy objects on top of this unit.
- Place the unit on a flat surface.
- Care should be taken so that objects do not fall into and liquids are not spilled into the unit.
- Do not subject this unit to excessive smoke, dust, mechanical vibration, or shock.
- Do not touch the plug with wet hands.
- Keep the unit away from electrical noise generating devices, such as fluorescent lamps and motors.
- The manufacture will not be liable for any communication failures caused by the product and/or any incidental damage sustained as a result of such failures.

Precautions

■ For the microphone

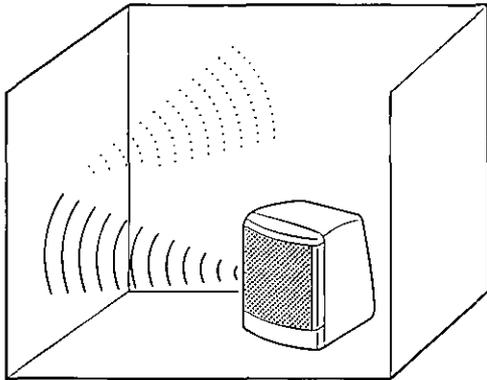
Simply place the microphone on a desk or any other flat surface.



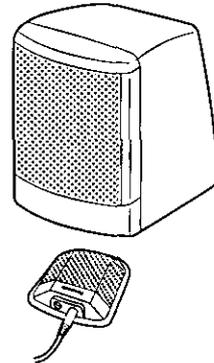
When it is difficult for the other party to hear the sound from your unit, bring the microphone closer.



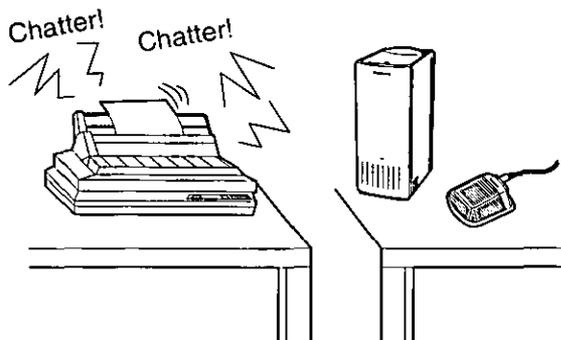
Pay attention to the reverberation of the sound in the room and use sound-absorbent material if necessary.



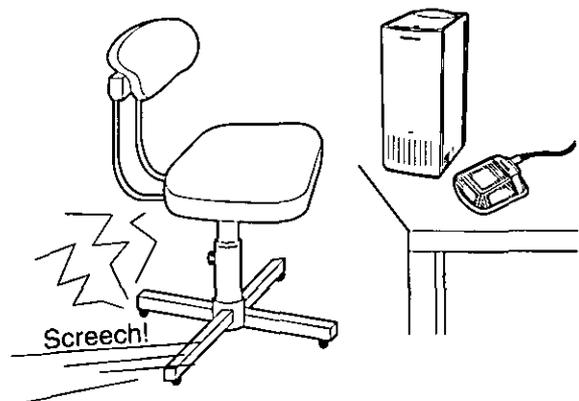
Do not place the microphone and speakers too close together.



Avoid placing unit in noisy environment.



Remove noisy objects from the room.



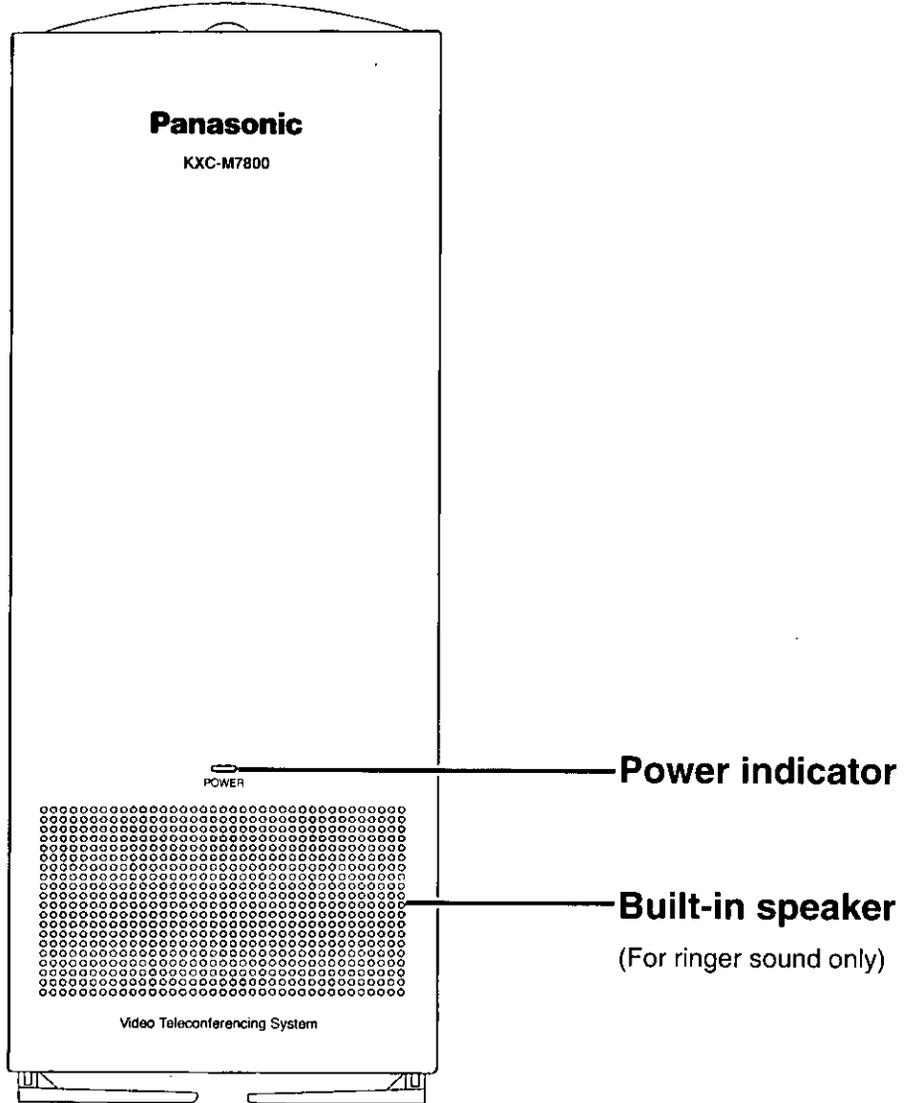
Specifications

ITU-T Standard	H.320	
Video	Video coding	H.261 , H.263
	Frame rate	30 Frames / Sec. (max.)
	Motion video resolution	FCIF : 352×288 pixels QCIF : 176×144 pixels
	Video graphics	Annex-D format : 704×576 pixels
	Video input	Main camera (RCA×1) Auxiliary camera (RCA×1) Document camera (RCA×1) VCR (RCA×1) S-Video
	Video output	Monitor 1 (RCA×1) Monitor 2 (RCA×1) VCR (RCA×1) S-Video
Audio	Echo cancellation	Full duplex (300ms / 3.4KHz)
	Bandwidth	50Hz to 7KHz
	Audio standard	G.711 50Hz to 3.4KHz G.722 50Hz to 7KHz G.728 50Hz to 3.4KHz
	Audio input	Proprietary Microphone×1 Phono Jack×1 VCR (RCA×1)
	Audio output	Monitor (RCA×1) VCR (RCA×1)
Data	Standard	LSD, HSD, MLP (for T.120)
	Transmission speed	Up to 64Kbps (HSD)
	Interface	RS-232C
Microphone	1 unit Max. 4 interlink cable (optional)	
Remote controller	Easy to use IR remote controller	
Network Interface	Channel format & control	H.221, H.242
	MCU control	H.243
	Transmission speed	64Kbps (56Kbps) 64Kbps (56Kbps) ×2 128Kbps (112Kbps) 192Kbps (168Kbps) 256Kbps (224Kbps) 320Kbps (280Kbps) 384Kbps (336Kbps)
	Interface	V.35×2, RS-449 (Optional cable required) ×2 and RS-366×2 (Dialing), X.21 (Optional cable required) ×2
Electrical	Power Source	AC 120V, 60Hz
	Power Consumption	55W / 180W (When connecting with the monitor)
Environment	Temperature	5 to 35°C
	Humidity	30 to 80%
Dimensions	117 (W) X 192 (D) X 310 (H)mm (4 5 / 8"X7 9/16"X11 29/32")	
Weight	4.9Kg (11lbs.)	

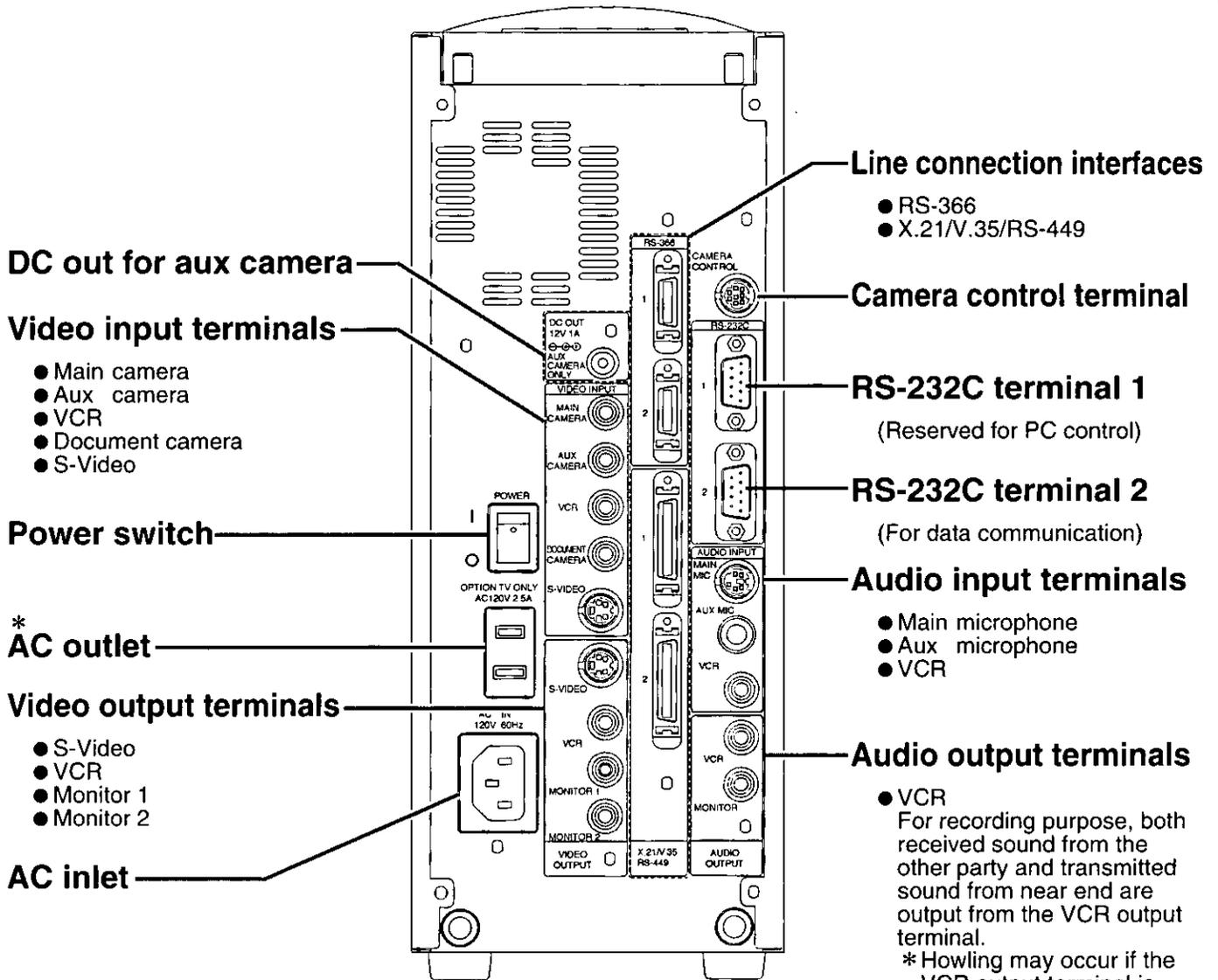
Location of the Controls

■ Codec

Front View



Rear View



Line connection interfaces

- RS-366
- X.21/V.35/RS-449

Camera control terminal

RS-232C terminal 1

(Reserved for PC control)

RS-232C terminal 2

(For data communication)

Audio input terminals

- Main microphone
- Aux microphone
- VCR

Audio output terminals

- VCR
For recording purpose, both received sound from the other party and transmitted sound from near end are output from the VCR output terminal.

* Howling may occur if the VCR output terminal is connected to audio input of monitor or external speaker.

- Monitor
Received sound is output from Monitor output terminal. The sound from VCR audio input terminal is also output for confirmation of the transmitting sound.

* To prevent equipment damage, do not plug in any other equipment except Panasonic specified monitor.

Optional monitors (Specified monitors) : CT-20G13 / CT-27SF25 / CT-32SF35

Remote Controller

- This serves as the Codec operation button when the MAIN setting has been selected for Camera Select.

Video source

Changes the video source
Pressing the **VIDEO** key switches the video input

→Main Camera→Aux Camera→Document Camera→Menu Display→

MUTE

Microphone on/off control

VIEW

Changes the output video (Monitor 1. VCR. S-Video)
Pressing the **VIEW** key switch the screen control.

→(Far end / PIP)→Far end→Self view→(Received graphics)
←(Sent graphics)←

- “Far end / PIP” can be selected only during communication.
- “Received graphics” or “Sent graphics” can be selected if there are graphics present in what is received or sent.

Cursor control

- Selection of the menu ● Insert
- Delete ● Next page ● Previous page

Confirm & call

Call, confirm, set

Menu screen

Turns the menu on/off

Escape

Return to previous menu screen

AIM

- Delete all directories
- Clear the transmission log
- Clear all speech rights in Multipoint

Far end control

- This operation is used to control the other party's camera
- Num Lock

IRIS

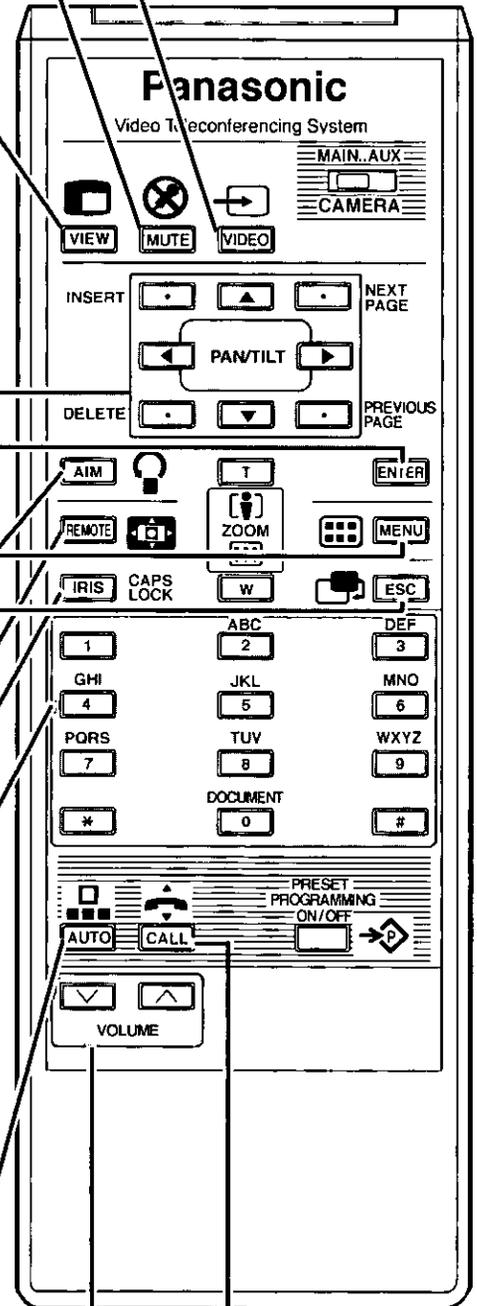
CAPS LOCK

Dial keys

- Input the telephone numbers with the dial keys.
- The dial keys are used to input the directory.
 - The character changes each time a key is pressed.
 - When inputting two characters contained on the same key in succession, press the **▶** key after inputting the initial character to set that character.

Auto dial key

- Press the **AUTO** key.
- Press the numeric key that you want to select (**1-0**).



Call

Call and hang up functions

Volume

Audio volume control

Location of the Controls

- This serves as the Codec operation button when the AUX setting has been selected for Camera Select. (For operation, point the remote controller at the Main Camera.)

Video source

Changes the video source
Pressing the **VIDEO** key switches the video input

→Main Camera→Aux Camera→Document Camera→Menu Display

MUTE

Microphone on/off control

VIEW

Changes the output video (Monitor 1. VCR. S-Video)
Pressing the **VIEW** key switch the screen control.

→(Far end / PIP)→Far end→Self view→(Received graphics)→
(Sent graphics)←

- "Far end / PIP" can be selected only during communication.
- "Received graphics" or "Sent graphics" can be selected if there are graphics present in what is received or sent.

Cursor control

- Selection of the menu • Insert
- Delete • Next page • Previous page

Confirm & call

Call, confirm, set

Menu screen

Turns the menu on/off

Escape

Return to previous menu screen

AIM

- Delete all directories
- Clear the transmission log
- Clear all speech rights in Multipoint

Far end control

- This operation is used to control the other party's camera
- Num Lock

IRIS

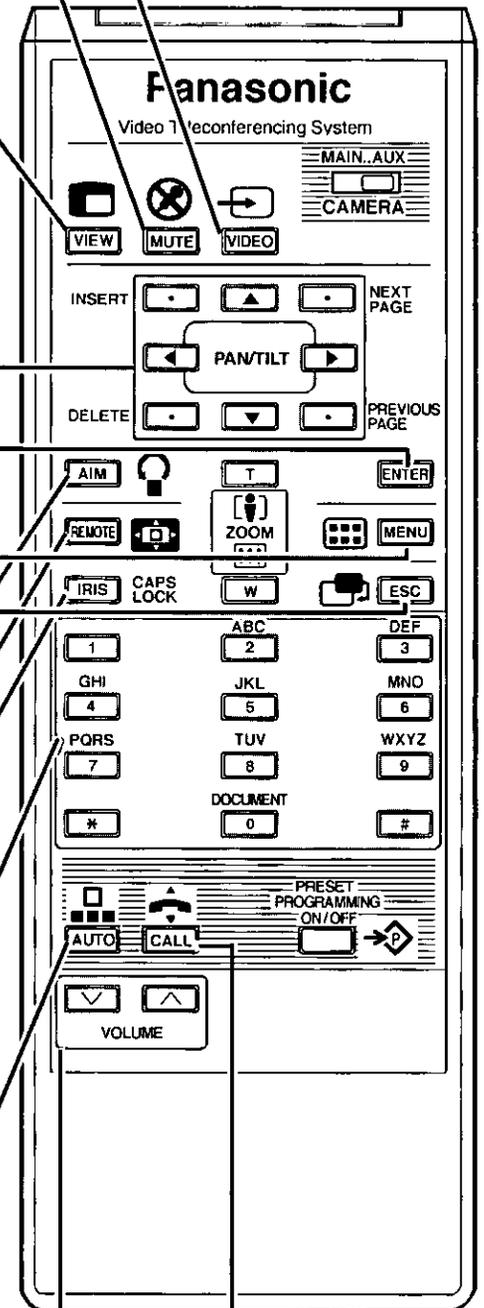
CAPS LOCK

Dial keys

- Input the telephone numbers with the dial keys.
- The dial keys are used to input the directory.
 - The character changes each time a key is pressed.
 - When inputting two characters contained on the same key in succession, press the **▶** key after inputting the initial character to set that character.

Auto dial key

- ① Press the **AUTO** key.
 - ② Press the numeric key that you want to select (**1-0**).
- To avoid the unexpected motion of Aux Camera by pressing Cursor control, AIM, IRIS and **1-0** keys, select Main setting for Camera Select during menu operation.



Call

Call and hang up functions

Volume

Audio volume control

- This serves as the Aux Camera operation button when the AUX setting has been selected for Camera Select. (At this setting, the Main Camera cannot be operated.)
Point the remote control toward the auxiliary camera when you press the operation buttons.

Camera select
Select control of main or auxiliary KXC-CM780 camera.

PAN / TILT control
Selection of the pan/tilt of the KXC-CM780 camera.

AIM
Directs camera position to remote controller
 • Depending on the distance between the camera and the remote controller, the conditions in the room being used, etc., the camera may not turn in the direction of the remote controller.

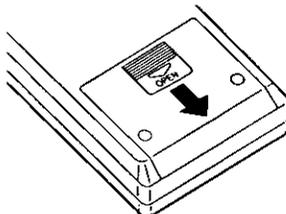
Camera control (Zoom function)
 T ...Telescope
 W ...Wide

IRIS
 Changes the camera backlight or to change the brightness of the screen.
 Pressing the **IRIS** key switches the camera backlight.
 → -3 → -2 → -1 → Default +1 → +2 → +3 → +4 →

Camera preset
 • The camera moves to the preset positions.
 Position **1** — **9** , **DOCUMENT 0**
 • Preset (Camera position memory)
 How to preset
 ① Adjust the camera position by using the **PAN/TILT**, **Zoom** key and the **IRIS** key.
 ② Press the **PRESET PROGRAMMING ON/OFF** key.
 ③ Press the numeric keys that you want to select (**1**-**0**).
 (* The **0** key is for the document position which is stored in the memory as the factory setting.)
 Document position
 The status in which the camera is pointed in such a way that the pan direction is straight ahead and the tilt direction is directly below.

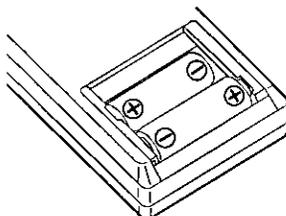
■ Replacing the Batteries

1. Open the lid.



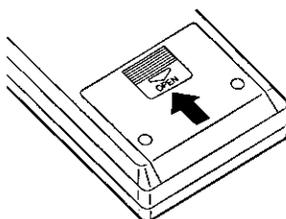
2. Replace the batteries.

- Insert two AA (R6 or LR6) batteries as indicated on the remote controller.



3. Close the lid.

- The lid will "click" when it is secured.



Note :

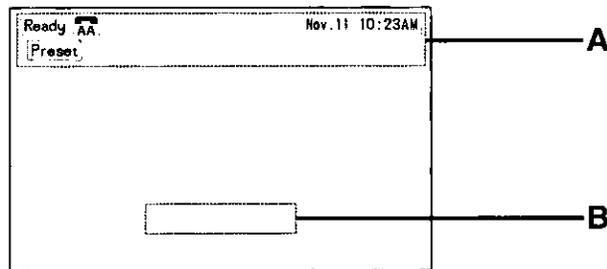
- If you do not install the batteries or if the battery power is low, misoperation may occur.
- Do not use rechargeable (Ni-Cd) batteries as some of their dimensions, shapes, and performances differ from normal batteries.
- Do not mix different brands of batteries.
- Do not charge, short-circuit, disassemble, heat, or dispose of batteries in fire.
- Remove all the batteries when replacing.

Basic Menu Operation

■ Description of Menu and Message Displays

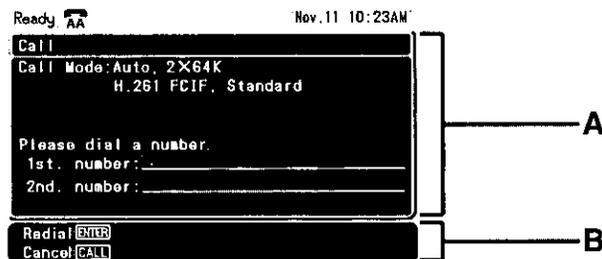
1. Icon and short message displays (Codec status displays)

The following icons and short messages are displayed in areas A and B enclosed by the dotted lines on the screen shown below. For further details, refer to the icon and short message list.



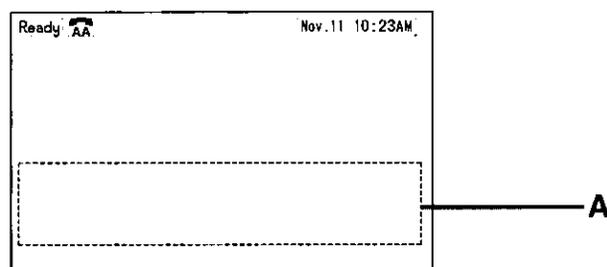
2. Menu and operation guidance displays (Codec operation menu and status transition displays)

The operation menus and messages indicating the status transitions are displayed in area A on the screen shown below. Guidance on how to operate the menu displayed in area A is displayed in area B. For further details, refer to the description of the operation functions.



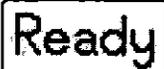
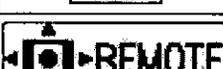
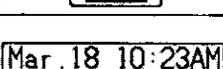
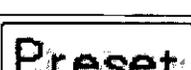
3. Error message displays (Error and warning displays)

Error and warning messages are displayed in area A enclosed by the dotted line on the screen shown below. For further details, refer to the error message list.

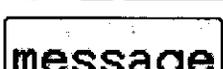
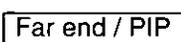
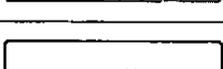
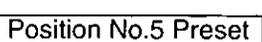


■ Icon and Short Message List

Area A icons (Statuses displayed at all times)

Name of icon	Icon	Status now displayed (description)	3Remarks
Ready		Now ready to originate or answer a call.	This is cleared while communication is in progress.
Auto answer		Now ready to automatically answer calls.	This can be changed using the Answer mode function.
Mute		Sound at the caller's end is now muted.	This can be changed using the Mute Key.
Privacy		Image at the caller's end is cut off, and a fixed image indicating video privacy is sent to the other party.	This can be changed using the Video Privacy function.
Freeze frame		Caller's image is temporarily frozen.	This can be changed using the Freeze frame function.
Remote		The other party's camera can now be remote-controlled.	This can be changed using the Far end control Key.
Chair		Chairperson status is displayed during MCU communication.	This can be changed using the MCU Chair control function.
Time / date		Time and date are displayed.	This can be changed using the Time/date display function.
Preset		Camera preset can now be registered.	This can be changed using the Preset Key.

Area B icons and short messages (statuses appear for approx. 2 seconds after which they are automatically cleared)

Name of icon	Icon	Status now displayed (description)	Remarks
Preset move		Status in which the camera has moved to the preset position.	Icon is displayed.
VIEW message		Message indicating current display status established by setting the VIEW Key.	Example: 
Preset message		Message confirming in which number the position has been preset using the Preset Key for registration.	Example: 

Remote Controller Keys Operations

Direct keys functions are as below.

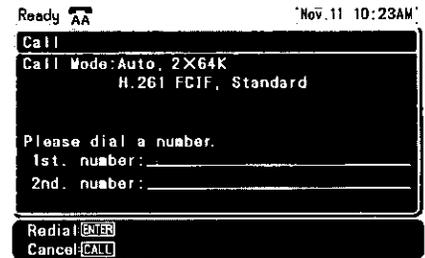
When direct key is pressed, its operation screen will appear.

Function	Direct key
Back Light Adjustment	IRIS
Speaker Volume Adjustment	VOLUME
Video Input Switching	VIDEO
Far End Control Operation	Far end control
Video Output Switching	VIEW
Microphone Mute	MUTE
Dialing Operation	AUTO or CALL
Receiving Operation	CALL

- For more details on the operation methods for the above items, refer to the operating instructions provided later.

Inputting Dial keys

These operations are subject to the following restrictions which apply to the items listed below.



Call screen (Call)	1st telephone number (max. 32 characters) 2nd telephone number (max. 32 characters)
Telephone directory (Directory)	Name (max. 20 characters) 1st telephone number (max. 32 characters) 2nd telephone number (max. 32 characters)
Auto Dial	Name (max. 20 characters) 1st telephone number (max. 32 characters) 2nd telephone number (max. 32 characters)
I-MUX prefix I-MUX suffix	Each rate (max. 20 characters) Each rate (max. 20 characters)
Multipoint Terminal Identity	Identity (max. 20 characters)

CAPS LOCK (upper-case letters) is the default setting for input into : "Name" of the telephone directory (Directory) and abbreviated dialing (Auto Dial) items as well the Multipoint Identity item.

The characters which can be input for the telephone numbers and I-MUX prefix and suffix are fixed to numbers. (Input cannot be switched to letters.)

For details on the characters which can be input and for input examples, refer to the character input list.

Character Input List

Button \ Display	Numbers NUM LOCK	Letters NORMAL	Letters CAPS LOCK
1	1	(None)	(None)
2	2	a b c	A B C
3	3	d e f	D E F
4	4	g h i	G H I
5	5	j k l	J K L
6	6	m n o	M N O
7	7	p q r s	P Q R S
8	8	t u v	T U V
9	9	w x y z	W X Y Z
0	0	(None)	(None)
*	*	(None)	(None)
#	#	(None)	(None)

As is indicated in the guidance, CAPS LOCK (upper-case letters only) is the default setting for input into : "Name" of the telephone directory and abbreviated dialing items as well as the Multipoint Identity item.

This means that when numerals are to be input, the **REMOTE** key (NUM LOCK) must be first be pressed to establish the numeral input enable status. The CAPS LOCK input enable status is restored by pressing the **REMOTE** key again.

When the **IRIS** key (CAPS LOCK) is pressed in the CAPS LOCK status, the NORMAL (lower-case letters only) input enable status is established.

The CAPS LOCK input enable status is restored by pressing the **IRIS** key again.

To insert a blank space, press the **▶** cursor key to move the cursor to the right, then resume typing.

To make corrections: • Use the **◀ ▶ ▲ ▼** cursor keys to move to the correct position.

- A space is inserted at the cursor position when **INS** (**◻**) is pressed.
(Spaces can be overwritten.)

- The character at the cursor position is deleted **DEL** (**◻**) is pressed, and the following character is moved back to fill the resulting space.

Input example : • "Tana_123"

Press the keys in

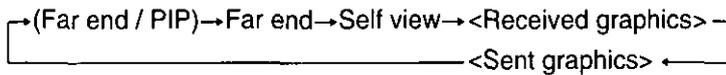
the following order : • **8** **IRIS** **2** **6** **6** **2** **▶** **▶** **REMOTE** **1** **2** **3**

Video Output Switching

Each time the **VIEW** key is pressed, the screen display is changed in the sequence shown below. Concurrently with these changes, a short message appears for about 2 seconds.

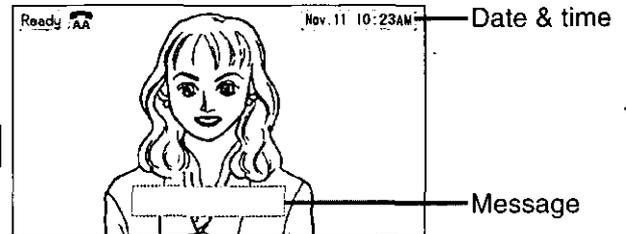
Changes the output video (Monitor 1. VCR. S-Video)

Pressing the **VIEW** key switch the screen control.



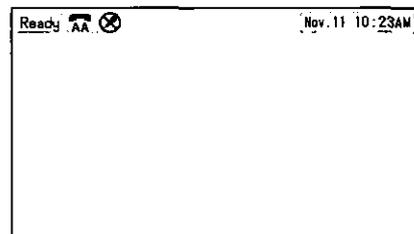
- (Far end / PIP) appears only during communication; <graphics> is a display which appears only after storage in the memory, and when this does not apply, it is skipped.

The changes are initiated by Far end start during non-communication; they are initiated by Far end / PIP start during communication.



Microphone Mute

When the **MUTE** key is pressed, the microphone sound at calling end is toggled between ON or OFF. Concurrently with this change, the icon () is displayed or cleared.



Basic Camera Operations

- The camera's default setting is automatic control (of IRIS, FOCUS and WHITE BALANCE).
- To change from automatic control to manual control, refer to the operation methods for each item.
- This camera is capable of pan, tilt and zoom operations which are performed using the remote controller.
- Match the camera switch which is to be operated with the camera select switch on the remote control.

Operation method

In most cases, the camera is operated while the image is viewed on the screen.

Therefore, operate the **VIDEO** key to select the camera to be operated and operate the **VIEW** key to switch the screen display while viewing this image.

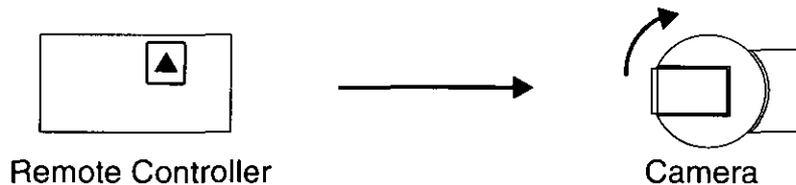
Before operating the camera, the select switch and the corresponding switch on the remote controller must be at the same settings.

- PAN and TILT operations (Set the Camera Select switch to the position that corresponds to the camera which will be operated.)

Press the remote controller's     cursor keys to select the movement direction. The camera can be tilted in one of 4 directions using the four  keys.

Note :

- As the default setting for the panning direction, the camera will move to the left as shown below when the  key is pressed toward the camera. (When pan control is normal.) The opposite directions can be set for panning using the Pan Control function. (Aux Camera cannot be set.)



- ZOOM operations (Set the Camera Select switch to the position that corresponds to the camera which will be operated.)

Press the remote controller's **T** (Telescope) or **W** (Wide) key to select the movement direction. Since the camera starts up in the **W** (Wide) mode which is the default setting, it will not move toward the **W** setting.

- AIM operations (Set the Camera Select switch to the position that corresponds to the camera which will be operated.)

When the remote controller's **AIM** key is pressed, the camera is aimed in the direction in which a flash is emitted toward the remote controller. For the purposes of the aiming direction, the panning angle is divided into 5, and the camera is aimed at one of these 5 positions. As such, the precision is not very high.

- Camera preset function

Set the Camera Select switch to MAIN when the Main Camera is to be operated.

Using this convenient function, different shooting statuses for the camera (pan, tilt, zoom and iris) can be stored into 10 keys from [1] to [0], and then the camera can be moved to a particular shooting status by pressing the corresponding preset key.

To proceed with a preset operation, first use the PAN, TILT, ZOOM and IRIS to store the camera's shooting status. (When IRIS has been set, exit the menu for the time being.)

Now press the [P] (Preset Programming) key to display the [Preset] icon, and press the number key--any key from [1] to [0]--in which the status is to be stored. When this is done, the "Position No. (= number of the key which was pressed) Preset" short confirmation message will appear for about 2 seconds at the bottom of the screen.

Upon completion of the presetting procedure, the camera will move to the preset status when the number key ([1] to [0]) in which the status was preset is pressed. This now completes the procedure.

The [P] key toggles between preset enable status ON and OFF.

Set the Camera Select switch to AUX when the AUX Camera is to be operated.

Using this convenient function, different shooting statuses for the camera (pan, tilt, zoom and iris) can be stored into 10 keys from [1] to [0], and then the camera can be moved to a particular shooting status by pressing the corresponding preset key.

To proceed with a preset operation, first use the PAN, TILT, ZOOM and IRIS to store the camera's shooting status.

Now press the [P] (Preset Programming) key to make the camera's Power LED (green) flash, and press the number key--any key from [1] to [0]--in which the status is to be stored.

When this is done, the Power LED (green) stops flashing, and registration is completed.

Upon completion of the presetting procedure, the camera will move to the preset status when the number key ([1] to [0]) in which the status was preset is pressed. This now completes the procedure.

The [P] key toggles between preset enable status ON and OFF.

Note :

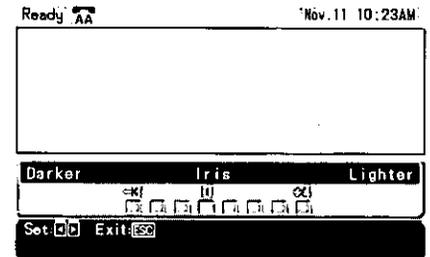
- Pan, Tilt, and Zoom can be used when the Main Camera preset icon is displayed and when the Aux Camera power LED is flashing.

■ Back Light Adjustment

Adjusts the back light of the connected camera.

You can change the brightness of the screen by using the **IRIS** key.

1. Press the **IRIS** key.



2. Set the main camera iris.

◀ keyChanges the iris setting so that the image is darker.

▶ keyChanges the iris setting so that the image is brighter.

(The brightness can be adjusted to one of eight levels, from -3 to +4.)

3. Press the **IRIS** key again to close the menu and finalize the setting.

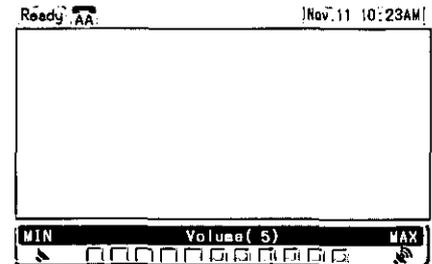
Note :

- When bright sources of light are present in some sections of the picture, bands of light may appear above and below those light sources.
- When the KXC-CM780 is to be used as an auxiliary camera, press the **IRIS** key on the remote controller to adjust the back light level.
- The IRIS operation menu is not displayed for an auxiliary camera, so check the image as you perform this operation (see page 19).

■ Speaker Volume Adjustment

Adjusts the audio volume.

1. The speaker volume can be adjusted using the VOLUME  or VOLUME  key. A bar indicating the volume level appears on the screen when the volume key is pressed. (The volume can be adjusted to one of 12 levels.)



Note :

- There may be a slight echo depending on the environment/condition of the other party's unit.

■ Video Input Switching

Switching the video input that is sent.

Pressing the **VIDEO** key switches the video input.

→Main Camera → Aux Camera → Document Camera → Menu Display →

- Select “Self view” or “Far end / PIP” by using “View” key, and confirm the video input is switched correctly.
- Use “Video input” on the menu to switch to an input other than Main / Aux / Document / Menu Display, or to switch to a camera view.

■ Far End Control Operation

This operation is used to control the other party's camera.

The following operations are possible :

Main camera pan / tilt / zoom, preset movement / preset entry, iris setting, and video input switching.

- There are five positions for camera preset movement / preset entry : **1** to **4** and **0**.

1. Press the **REMOTE** key on the remote control.

- The **REMOTE** icon appears at the top of the main monitor.
- Far End Control is possible while this icon is displayed.
- Far End Control is possible when the remote end is a KXC-M6500, M7500, or M7800.
- Even if the remote end is a KXC-M6500, M7500, or M7800, the icon will not be displayed if Far End Control is blocked at the remote end (Far End Control not possible).

2. Perform camera pan / tilt / zoom, preset movement / preset entry, iris setting, and video input switching operations.

3. Press the **REMOTE** key on the remote controller again.

- The **REMOTE** icon at the top of the main monitor disappears, and Far End Control is no longer possible.
- If the KXC-M7500 or KXC-M6500 is used at the other end, operation is restricted to pan, tilt and zoom.
- Aux Camera Far End Control cannot be used.

Dialing Operation

Single-channel Dialing (Internal)

If the transmission speed is set to "56K / 112K / 168K / 224K / 336K" or "64K / 128K / 192K / 256K / 384K", make a call as follows :

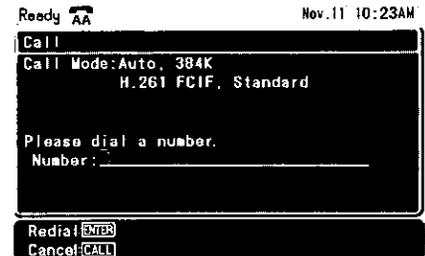
1. Press the **CALL** key.

Description of Call Mode:

<u>Auto</u> ,	<u>384K</u>	<u>H.261 FCIF</u> ,	<u>Standard</u>
↑	↑	↑	↑
Audio Mode	Transmission Speed	Video Resolution	Picture Quality

- The Call Mode can be set and checked using the communication functions.
- During communication, it can be checked using the communication status function.

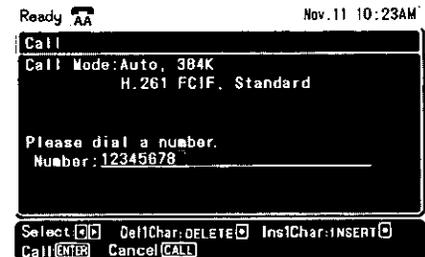
The communication mode and dial input screen appears.



2. Enter the dial number and press the **ENTER** key.

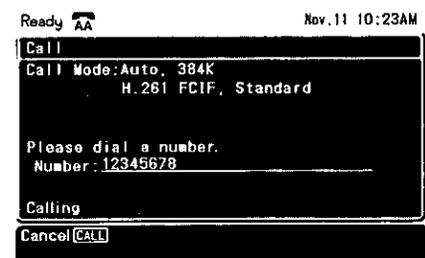
To correct the characters, move the cursor back to the characters to be corrected using the **◀** cursor key and input the new characters over the old ones.

- Refer to the procedure for inputting characters. (See page 24)



3. "Calling" appears at the bottom left of the screen and the line connection procedure is initiated.

*"Connecting video conference" is displayed when the other party responds to the incoming call.



Note:

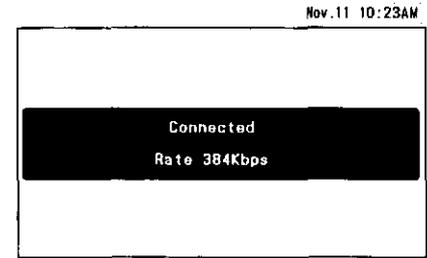
- When ISDN sub address is set to other party's terminal, it is necessary to enter both dial number and address number.

Refer to the manual of TA/CSU regarding the procedure to dial to ISDN sub address.

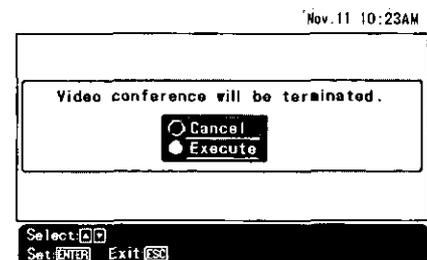
Dialing Operation

- 4.** “Connected” will appear on the center of the screen and an image of the party called is displayed. Communication between the two parties will be enabled. (The connected transmission speed is also displayed.)

* If a mosaic pattern appears for several seconds on the monitor of the party called after communication is enabled, move your hand in front of the calling party’s camera lens to clear the mosaic pattern.

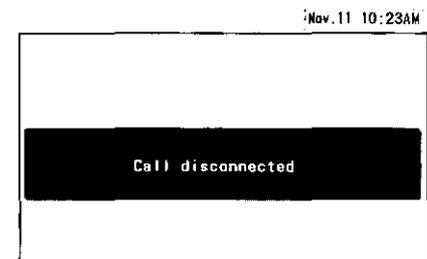


- 5.** To terminate the communication, press the **CALL** key.



- 6.** Select “Execute” using the **▼** cursor key, and then press the **ENTER** key.

“Call disconnected” appears and the communication is terminated.



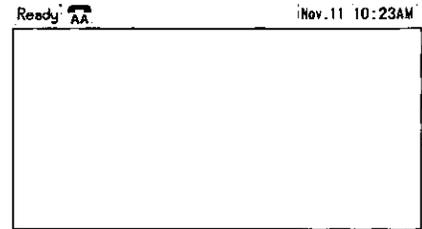
Note :

- When the “audio only” display is added to the connected transmission speed, it indicates that a status is established in which the image cannot be sent because of certain combinations of the transmission speed and audio mode. This status can be checked even after connection by checking the communication status (when “No use” is set for video resolution).
- A combination of the transmission speed and audio mode producing the “audio only” display is a combination of 56K and 64K for the transmission speed and G.711 and G.722 for the audio mode.

Single-channel Dialing (External)

If the transmission speed is set to "56K / 112K / 168K / 224K / 336K" or "64K / 128K / 192K / 256K / 384K", make a call as follows :

1. Confirm that "Ready" is shown on the screen.



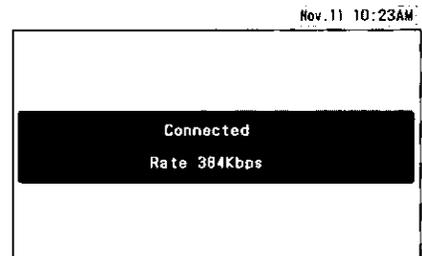
2. Select CH1 on the TA / CSU panel and enter the first dial number.

The screen of the TA / CSU shows that the CH1 is "connected", and transmission starts automatically.

* "Connecting video conference" is displayed when the other party responds to the incoming call.

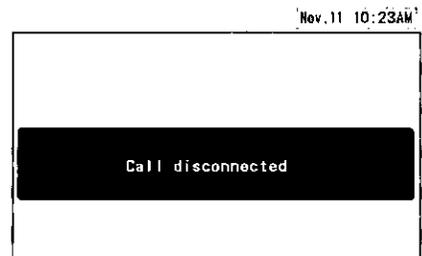
3. When connection is completed, "Connected" appears in the center of the screen, then the image of the party called appears, and communication is enabled.

* If a mosaic pattern appears for several seconds on the monitor of the party called after communication is enabled, move your hand in front of the calling party's camera lens to clear the mosaic pattern.



4. To terminate the communication, press a button for disconnection on the TA / CSU panel.

"Call disconnected" appears on the screen, and communication is terminated.



Note :

- When ISDN sub address is set to other party's terminal, it is necessary to enter both dial number and address number.

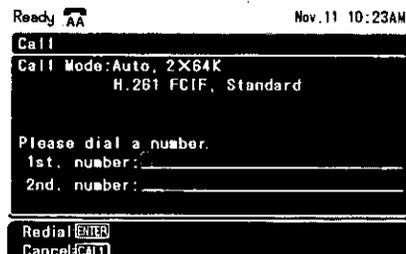
Refer to the manual of TA/CSU regarding the procedure to dial to ISDN sub address.

Dual-channel Dialing (Internal)

If the transmission speed is set to “2×64K” or “2×56K”, make a call as follows :

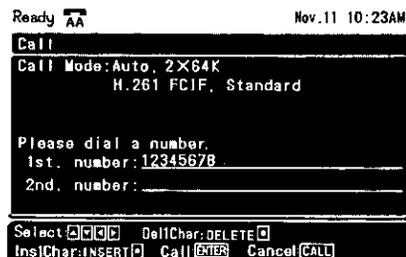
1. Press the **CALL** key.

The communication mode and dial input screen appears.



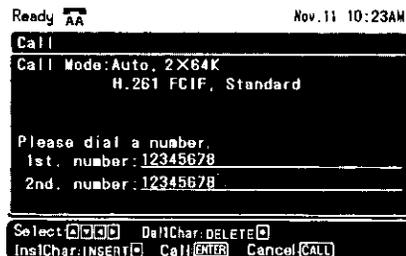
2. Enter the (first) dial number and press the **▼** key.

To correct the characters, move the cursor back to the characters to be corrected using the **◀** cursor key and input the new characters over the old ones.



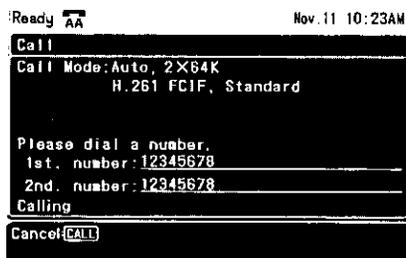
3. Enter the (second) dial number and press the **ENTER** key.

If this number is the same as the (first) dial number, it can be input automatically by pressing the **ENTER** key.



4. “Calling” appears at the bottom left of the screen and the line connection procedure is initiated.

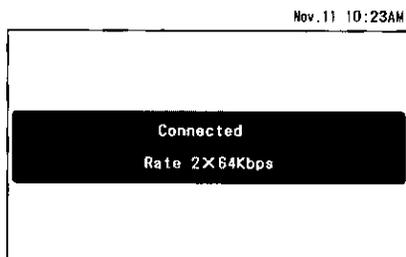
* “Connecting video conference” is displayed when the other party responds to the incoming call.



5. “Connected” will appear in the center of the screen and an image of the party called is displayed.

Communication between the two parties will be enabled.

* If a mosaic pattern appears for several seconds on the monitor of the party called after communication is enabled, move your hand in front of the calling party’s camera lens to clear the mosaic pattern.

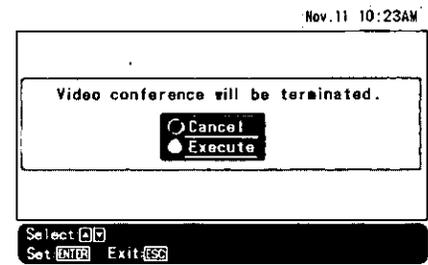


Note :

- When ISDN sub address is set to other party’s terminal, it is necessary to enter both dial number and address number.

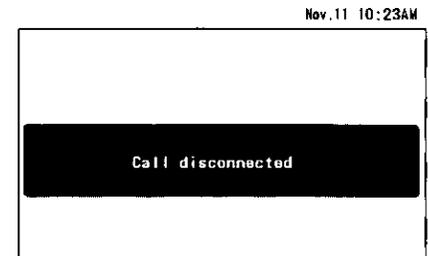
Refer to the manual of TA/CSU regarding the procedure to dial to ISDN sub address.

6. To terminate the transmission, press the **CALL** key.



7. Select "Execute" using the **▼** cursor key, and then press the **ENTER** key.

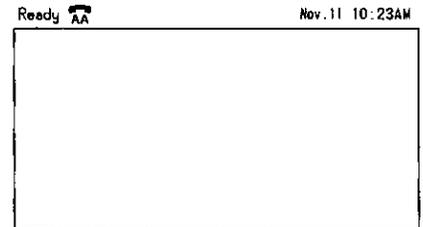
"Call disconnected" appears on the screen, and communication is terminated.



■ Dual-channel Dialing (External)

If the default transmission speed is set to "2×64K" or "2×56K", make a call as follows :

1. Confirm that "Ready" is shown on the screen.



2. Select CH1 on the TA / CSU panel and enter the first dial number.

The screen of the TA / CSU shows that the CH1 is "connected".

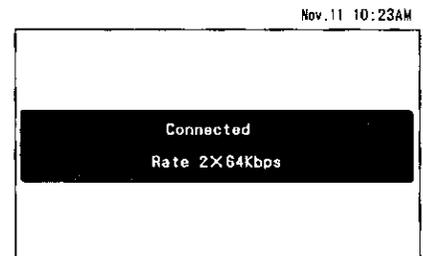
3. Select CH2 on the TA / CSU panel and enter the second dial number.

The screen of the TA / CSU shows that the CH2 is "connected", and transmission starts automatically.

* "Connecting video conference" is displayed when the other party responds to the incoming call.

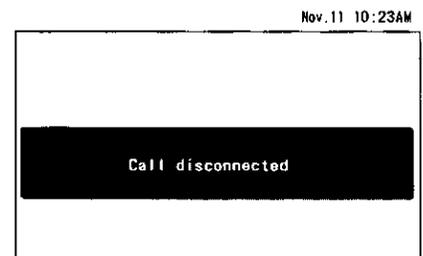
4. When connection is completed, "Connected" appears in the center of the screen, then the image of the party called appears, and communication is enabled.

* If a mosaic pattern appears for several seconds on the monitor of the party called after communication is enabled, move your hand in front of the calling party's camera lens to clear the mosaic pattern.



5. To terminate the communication, press a button for disconnection on the TA / CSU panel.

"Call disconnected" appears on the screen, and communication is terminated.



Note :

- When ISDN sub address is set to other party's terminal, it is necessary to enter both dial number and address number.

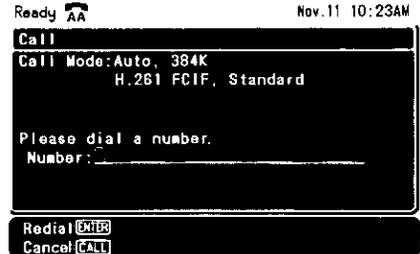
Refer to the manual of TA/CSU regarding the procedure to dial to ISDN sub address.

Redial

This function can be used for calling the last dialed number.

1. Press the **CALL** key.

The communication mode and dial input screen appears.

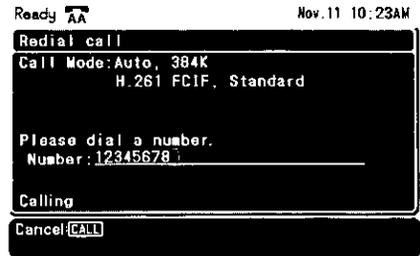


2. When the **ENTER** key is pressed, the last number dialed is displayed and is automatically dialed.

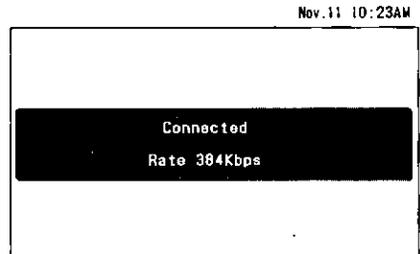
“Calling” appears at the bottom left of the screen.

With redial, the last number dialed and the communication mode are stored in the memory.

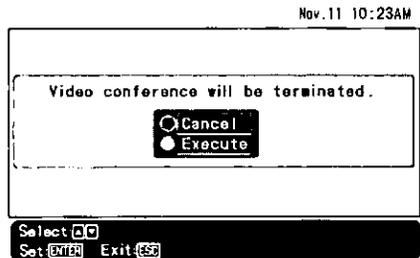
* “Connecting video conference” is displayed when the other party responds to the incoming call.



3. “Connected” will appear in the center of the screen and an image of the party called is displayed. Communication between the two parties will be enabled.

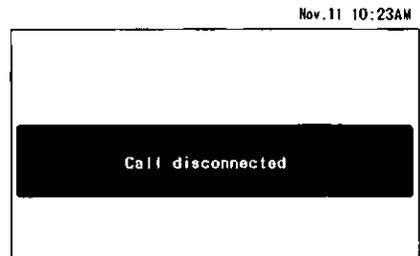


4. To terminate the transmission, press the **CALL** key.



5. Select “Execute” using the **▼** cursor key, and then press the **ENTER** key.

“Call disconnected” appears on the screen, and the transmission is terminated.



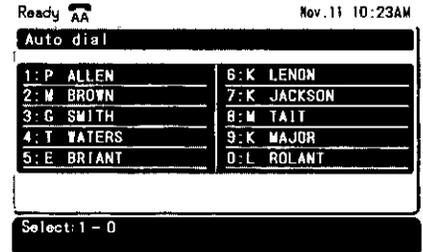
Note :

- When a call has been disconnected, check that the call was disconnected at the TA.

■ Auto Dialing

Auto dialing can be used when numbers are pre-registered with the numeric keys.
(Refer to page 48 for information on registering telephone numbers.)

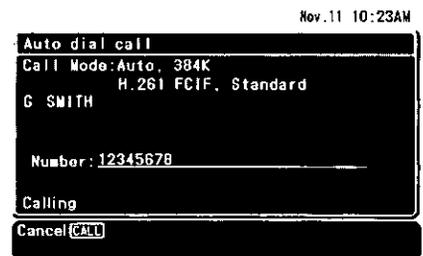
1. Press the **AUTO** key.
Select the party to be called using the **1** to **0** dial keys.



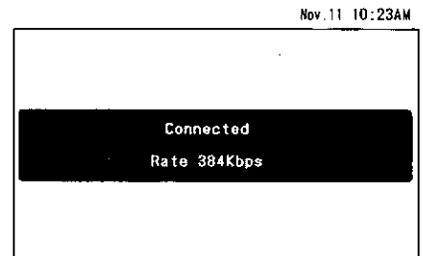
2. The number to be dialed will be displayed.

"Calling" appears at the bottom left of the screen.

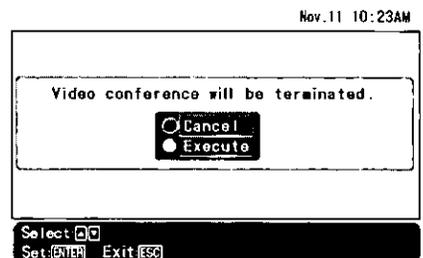
* "Connecting video conference" is displayed when the other party responds to the incoming call.



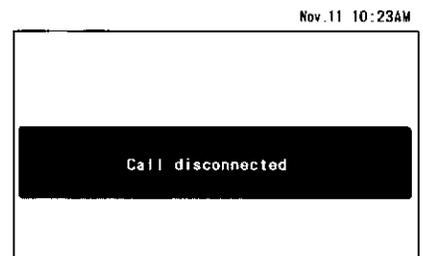
3. "Connected" will appear in the center of the screen and an image of the party called is displayed.
Communication between the two parties will be enabled.



4. To terminate the transmission, press the **CALL** key.



5. Select "Execute" using the **▼** cursor key, and then press the **ENTER** key.
"Call disconnected" appears on the screen, and the transmission is terminated.



Note :

- When a call has been disconnected, check that the call was disconnected at the TA.

Receiving Calls

You can receive a call either automatically or manually.

1. When an incoming call is received, "Incoming call" is displayed on the screen.

In the auto answer mode, the incoming call is received automatically.

In the manual mode, press the **CALL** key.

* Refer to page 81 for the Auto/Manual setting.

- When the incoming call is allowed by the **CALL** key, the "Receive **CALL**" display is cleared, and "Connecting video conference" is displayed instead.

2. "Connected" will appear in the center of the screen and an image of the party called is displayed.

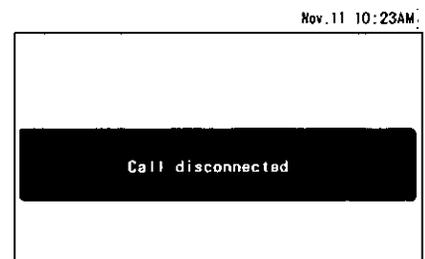
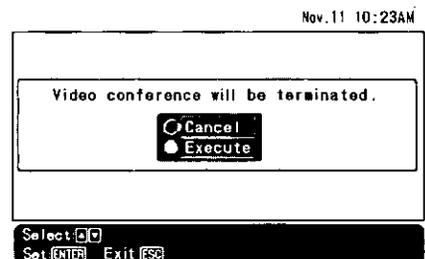
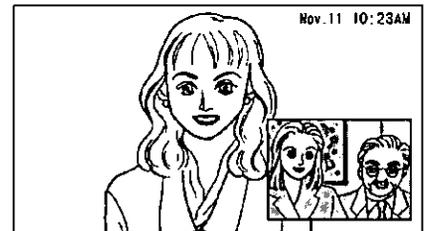
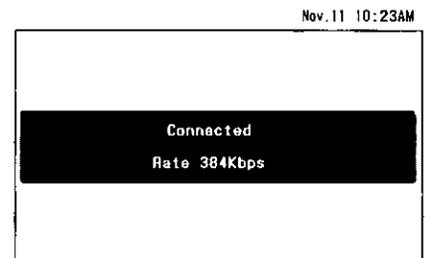
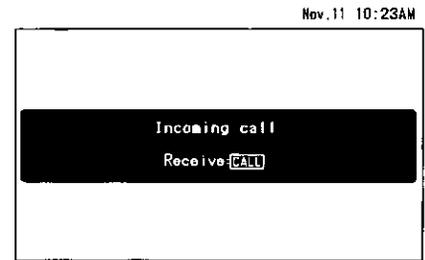
3. Communication will be enabled.

* The color of the received picture can be adjusted on the monitor TV side.

4. To terminate the transmission, press the **CALL** key.

5. Select "Execute" using the **▼** cursor key, and then press the **ENTER** key.

"Call disconnected" appears on the screen, and the transmission is terminated.

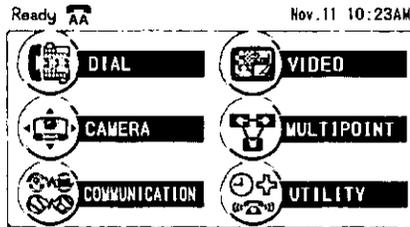


Note :

- When a call has been disconnected, check that the call was disconnected at the TA.

Menu Operations

Menu operations are initiated by pressing the remote controller's **MENU** key to display the main menu as shown on the screen below and then by using the **◀ ▶ ▲ ▼** cursor keys to select the functions desired.



When a function is selected by the cursor, it is indicated with a blue background, it is entered when the **ENTER** key is pressed, and operation then proceeds to the menu immediately below in the hierarchy. To return to the menu immediately above in the hierarchy, press the **ESC** key.

To exit a menu, press the **MENU** key again, and the initial screen will be restored.

As a means of indicating caution, a gray background for a function means that it cannot be selected. This is not indicative of trouble, and it means that the function is masked to prohibit it from being selected.

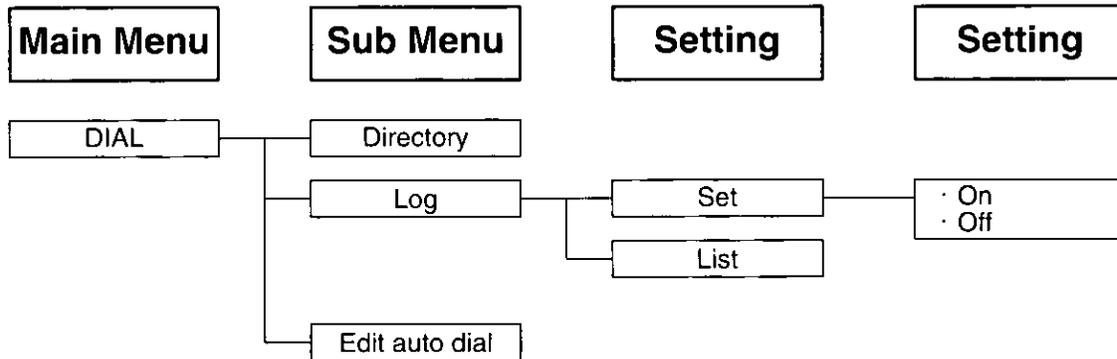
Listed below are the functions which can be selected.

- DIAL Function
- CAMERA Function
- COMMUNICATION Function
- VIDEO Function
- MULTIPOINT Function
- UTILITY Function

* For more details on the operation methods for the above items, refer to the operating instructions provided later.

Dial Functions

[Dial Menu List]

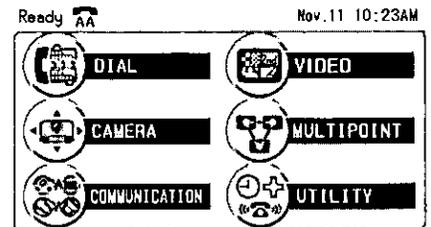


Dial
Functions

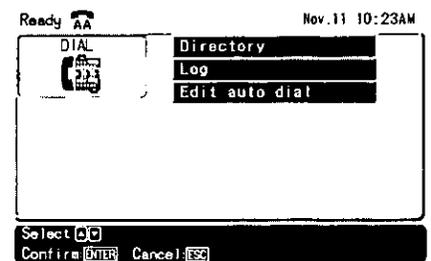
■ Directory

This allows you to register entries in the directory, edit the directory, and make calls from the directory. (Up to 100 entries can be registered in the directory.)

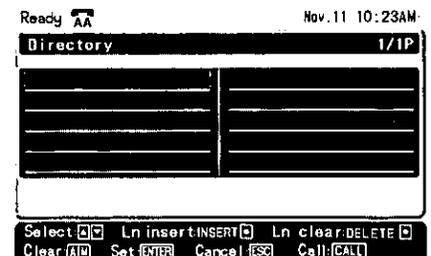
1. Press the **[MENU]** key.
Select "DIAL" using the **[◀] [▶] [▲] [▼]** cursor keys, and then press the **[ENTER]** key.



2. Select "Directory" using the **[▼]** cursor key, and then press the **[ENTER]** key.



3. Press the **[ENTER]** key.
 - Ten entries can be registered on one page.
When more than ten entries have been registered, use the **[◻]** (NEXT PAGE) key and the **[◻]** (PREVIOUS PAGE) key to select the page where a new entry is to be registered.
 - "Ln" denotes a single line.



Dial Functions

4. Enter information for each entry, the "Name", "1st No." and "2nd No." using the dial keys.

Use either the  or  key to move the cursor, and the  or  key to select the items to be entered.

* Spaces can be entered using the  cursor key.

* Each time the key is pressed, the characters change in sequence.

When entering two characters contained on the same key in succession, press the  key after entering the initial character to set that character.

● Refer to the procedure for inputting characters. (See page 24)

5. Use the cursor key to select "Transmission speed", and then use the and cursor keys to set the "Transmission speed".

6. Press the key.

● To make another entry, select the next item using the  or  cursor key.

Then repeat the step [3] through [6].

7. To quit, press the key.

Ready AA Nov.11 10:23AM

New Directory

Name: G SMITH

1st no.: 12345678

2nd no.: 12345678

Transmission speed: 384K

Ready Num

Select   Num lock:  Caps lock: 
 DelChar:  InsChar:  Confirm: 

Ready AA Nov.11 10:23AM

New Directory

Name: G SMITH

1st no.: 12345678

2nd no.: 12345678

Transmission speed: 384K

Select  Set 
 Confirm:  Cancel: 

Ready AA Nov.11 10:23AM

Directory 1/1P

G SMITH

Select  Ln insert:  Ln clear: 
 Clear:  Set:  Cancel:  Call: 

Ready AA Nov.11 10:23AM

Directory 1/2P

P ALLEN	K LENON
M BROWN	K JACKSON
G SMITH	M TAIT
T WATERS	K MAJOR
E BRIANT	L ROLANT

Select  Ln insert:  Ln clear: 
 Clear:  Set:  Cancel:  Call: 

Adding an item :

1. In step 3 on the Directory screen (page 41), use the cursor keys to select the location where to add an entry, and then press the (INSERT) key.

2. Follow steps [4] to [7] above to make your entry.

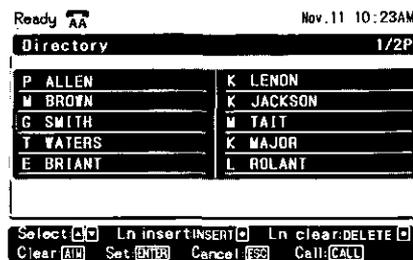
Note :

- When ISDN sub address is set to other party's terminal, it is necessary to enter both dial number and address number.

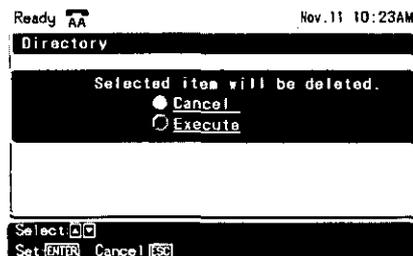
Refer to the manual of TA/CSU regarding the procedure to dial to ISDN sub address.

Deleting an item :

1. In step 3 on the Directory screen (page 41), use the     cursor keys to select the item to be deleted, and then press the  (DELETE) key.



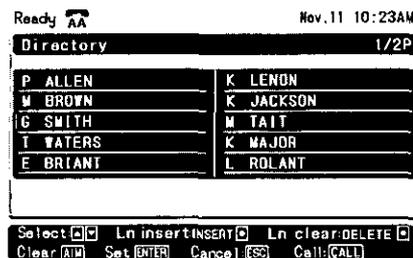
2. Select "Execute" using the  cursor key, and then press the  key.



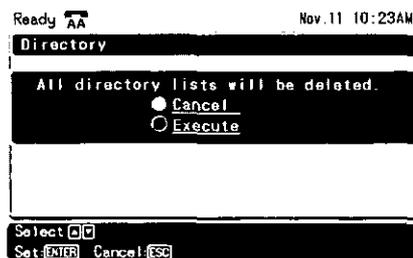
3. To quit, press the  key.

Deleting all items :

1. In step 3 on the Directory screen (page 41), press the  key.



2. Select "Execute" using the  cursor key, and then press the  key.



3. To quit, press the  key.

Dial Functions

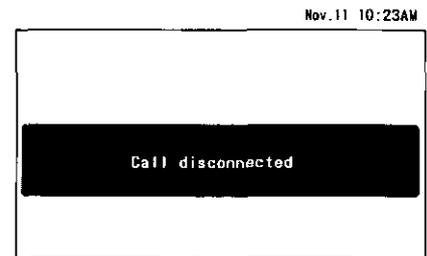
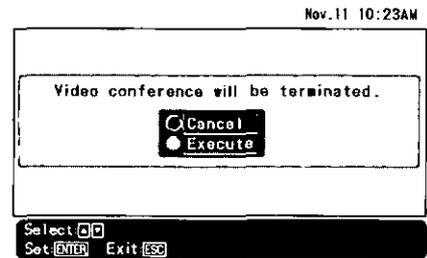
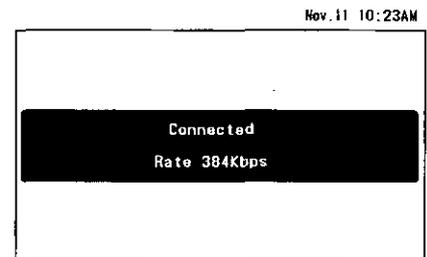
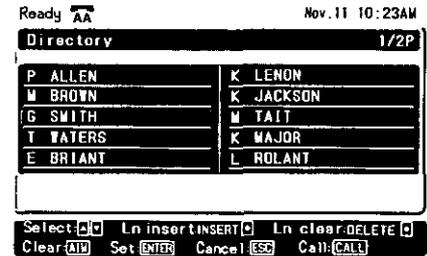
Making a call :

1. In step 3 on the Directory screen (page 41), use the     cursor keys to select the party to be called, and then press the **CALL** key.
* "Connecting video conference" is displayed when the other party responds to the incoming call.

2. "Connected" will appear in the center of the screen and an image of the party called is displayed. Communication between the two parties will be enabled.

3. To terminate the transmission, press the **CALL** key.

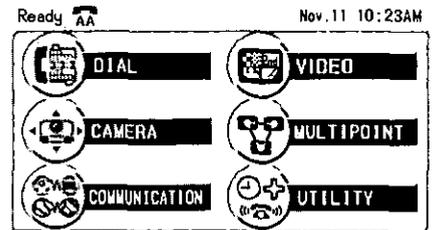
4. Select "Execute" using the  cursor key, and then press the **ENTER** key.
"Call disconnected" appears on the screen, and the transmission is terminated.



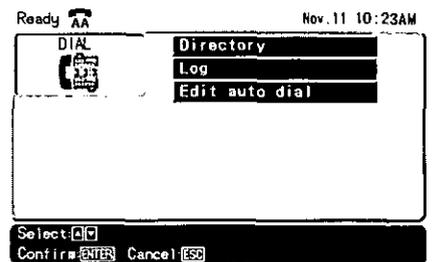
Log

This enables or disables automatic logging function.

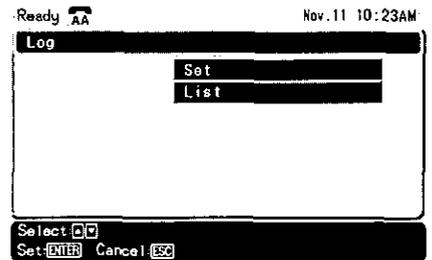
1. Press the **MENU** key.
Select "DIAL" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



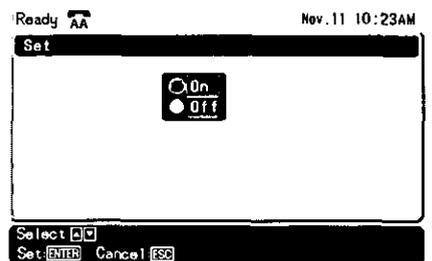
2. Select "Log" using the **▼** cursor key, and then press the **ENTER** key.



3. Select "Set" using the **▼** cursor key, and then press the **ENTER** key.



4. Select "On" or "Off" using the **▼** cursor key, and then press the **ENTER** key.



5. To quit, press the **MENU** key.

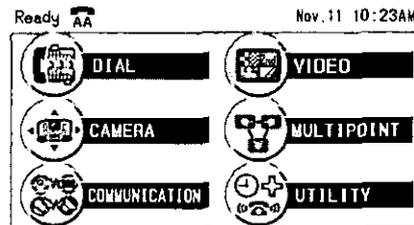
Note :

- If you make a call from TA/CSU panel or receive, the logs are not stored.

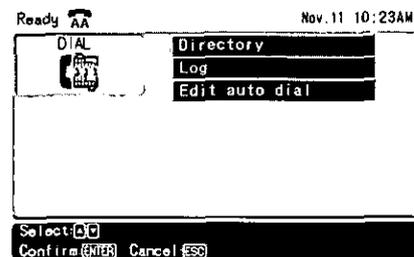
■ Transmission Logs

This displays the details of the latest 50 transmissions and you can place a call by selecting one of the log listings.

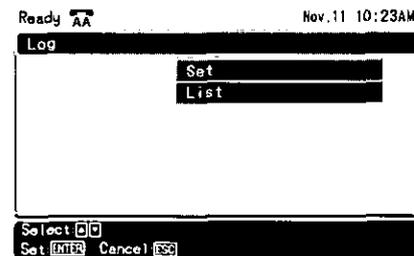
1. Press the **MENU** key.
Select "DIAL" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



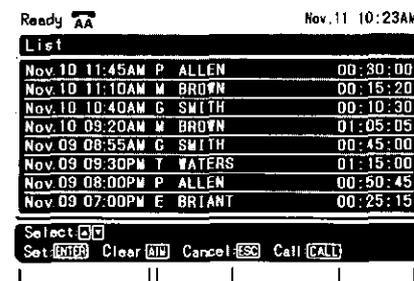
2. Select "Log" using the **▼** cursor key, and then press the **ENTER** key.



3. Select "List" using the **▼** cursor key, and then press the **ENTER** key.
Up to 50 items can be stored by the transmission log.



4. To check details, select an item using the **▼** cursor key, and then press the **ENTER** key.
To quit (details panel), press the **ESC** function key.

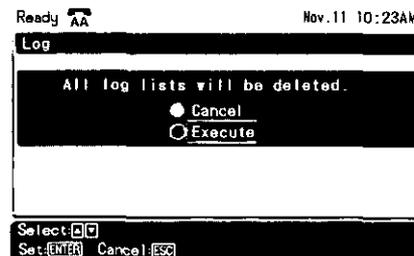


Communication start date and time Communication remote party name Communication duration

5. To call, select the item to be called using the **▼** cursor key, and then press the **CALL** key.

6. To clear the entire transmission log, press the **AIM** (Clear) key.

7. Select "Execute" using the **▼** cursor key, and then press the **ENTER** key.



8. To quit, press the **MENU** key.

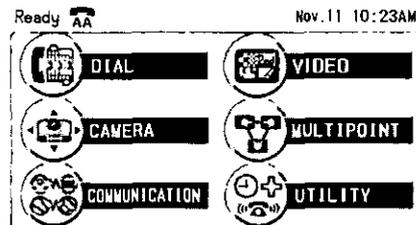
Note :

- If you make a call from the TA/CSU panel or receive, the logs are not stored.

■ Edit Auto Dial

This allows you to register and edit auto dial numbers.
(Up to 10 auto dial numbers can be registered.)

1. Press the **MENU** key.
Select "DIAL" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.

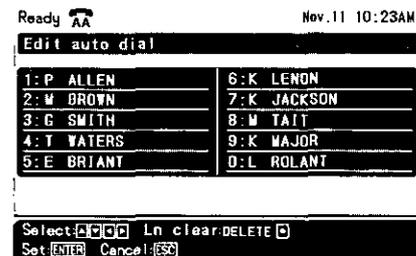


2. Select "Edit auto dial" using the **▼** cursor key, and then press the **ENTER** key.

"None" - No entry has been made in this location.



3. Use the **▲ ▼ ▶ ◀** cursor keys to select the item to be registered or edited, and then press the **ENTER** key.



4. Enter information for each record, Input the "Name", "1st No." and "2nd No." using the dial keys.

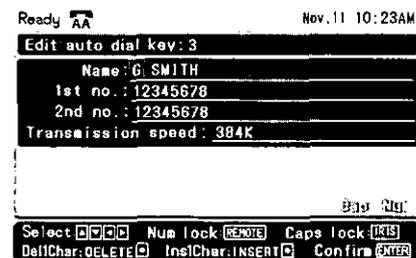
Use either the **▶** or **◀** key to move the cursor, and the **▼** or **▲** key to select the items to be entered.

* Spaces can be entered using the **▶** cursor key.

* Each time the key is pressed, the characters change in sequence.

When entering two characters contained on the same key in succession, press the **▶** key after entering the initial character to set that character.

● Refer to the procedure for inputting characters. (See page 24)

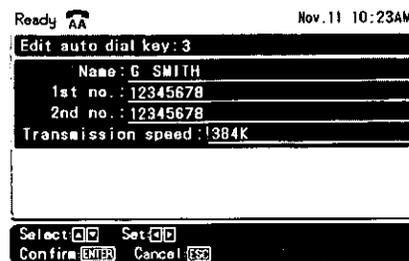


Note :

- When ISDN sub address is set to other party's terminal, it is necessary to enter both dial number and address number.

Refer to the manual of TA/CSU regarding the procedure to dial to ISDN sub address.

5. Use the cursor key to select "Transmission speed", and then use the and cursor keys to set the "Transmission speed".
Next press to enter the selection.



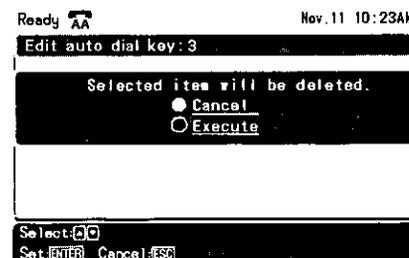
6. To quit, press the key.

• Deleting an item :

1. In step 3 on the Edit auto dial screen (page 48), use the cursor keys to select the item to be deleted, and then press the (DELETE) key.



2. Select "Execute" using the cursor key, and then press the key.

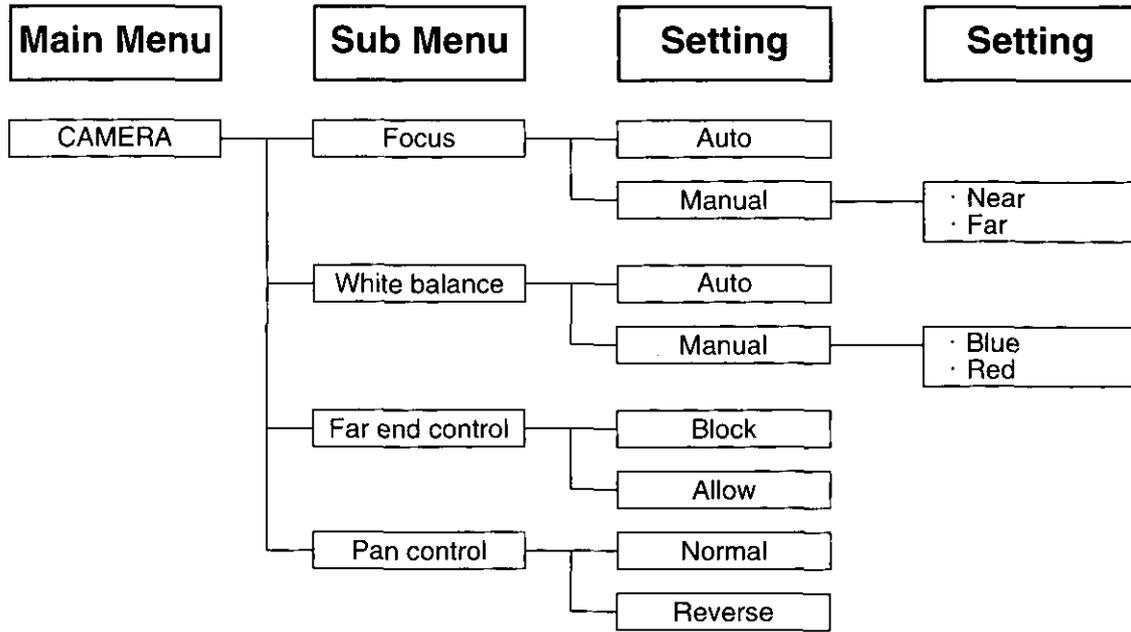


3. To quit, press the key.

Dial Functions

Camera Functions

【Camera Menu List】



Camera Functions

- No menus can be displayed if AUX has been selected as the remote controller's Camera Select setting.

■ Focus

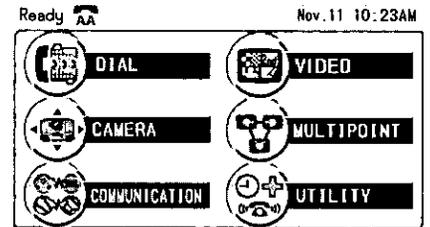
Sets the focus mode of the “KXC-CM780” main camera.

AutoThe main camera is automatically adjusted to the optimum focus.

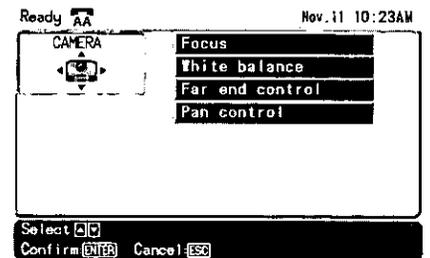
Manual ...The focus can be adjusted manually using the ◀ and ▶ cursor keys.

1. Press the **MENU** key.

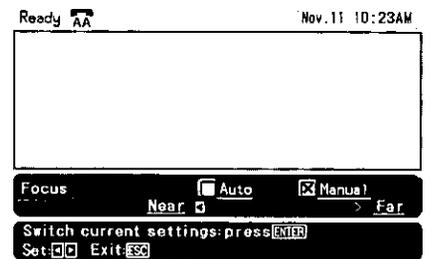
Select “CAMERA” using the ◀ ▶ ▲ ▼ cursor keys, and then press the **ENTER** key.



2. Select “Focus” using the ▼ cursor key, and then press the **ENTER** key.



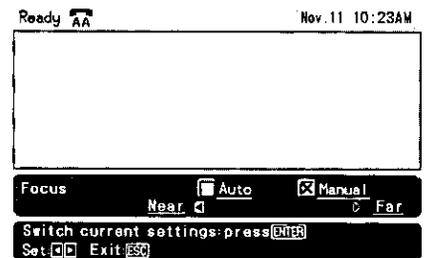
3. Press **ENTER** to switch between auto focus and manual focus.



4. When “Manual” has been selected, adjust the focus using the ◀ and ▶ cursor keys.

Near ◀The camera is focused on objects which are nearer.

Far ▶The camera is focused on objects which are further away.



5. To quit, press the **MENU** key.

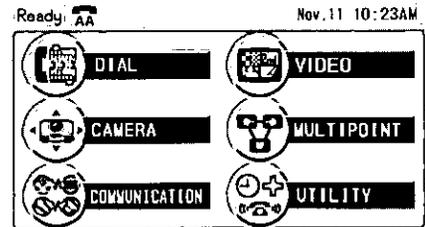
White Balance

Sets the white balance mode of the “KXC-CM780” main camera.

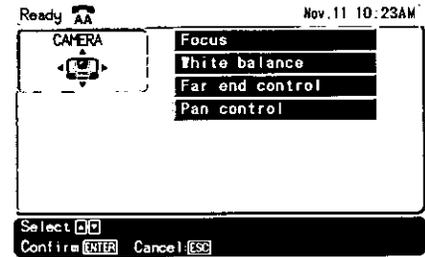
AutoThe main camera is automatically adjusted to the optimum white balance.

Manual ...The white balance can be adjusted manually using the ◀ and ▶ cursor keys.

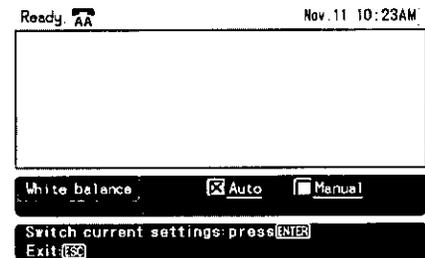
1. Press the **MENU** key.
Select “CAMERA” using the ◀ ▶ ▲ ▼ cursor keys, and then press the **ENTER** key.



2. Select “White balance” using the ▼ cursor key, and then press the **ENTER** key.



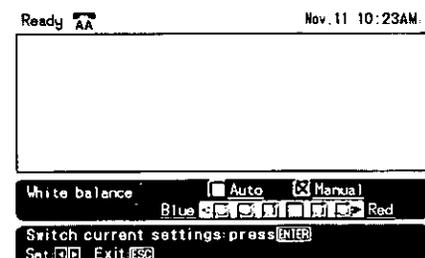
3. Press **ENTER** to switch between auto and manual white balance settings.



4. When “Manual” has been selected, the manual adjustment menu is displayed. Adjust the white balance using the ◀ and ▶ cursor keys.

Blue ◀The white balance becomes progressively more bluish.

Red ▶The white balance becomes progressively more reddish.



5. To quit, press the **MENU** key.

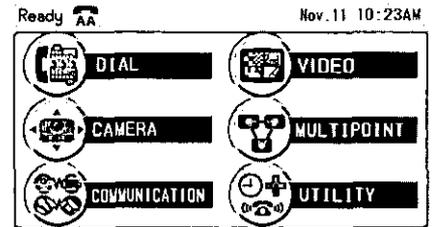
■ Far End Control

Setting determines whether the camera operations performed from the other party are to be allowed or blocked.

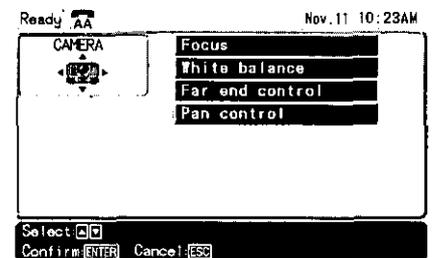
AllowThe camera operations (pan, tilt, zoom, preset movement, preset entry, iris, video input switching) performed by other party are allowed.

BlockThe camera operations performed by the other party are blocked.

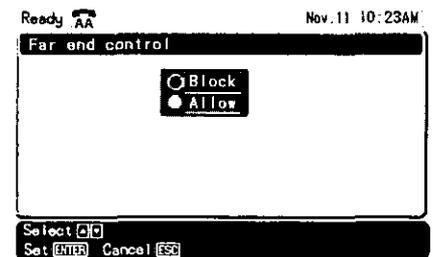
1. Press the **MENU** key.
Select "CAMERA" using the     cursor keys, and then press the **ENTER** key.



2. Select "Far end control" using the  cursor key, and then press the **ENTER** key.



3. Select "Allow" or "Block" using the  cursor key, and then press the **ENTER** key.



4. To quit, press the **MENU** key.

■ Pan Control

Sets the direction in which the camera is to be panned.(See page 26 for information on the Pan direction references.)

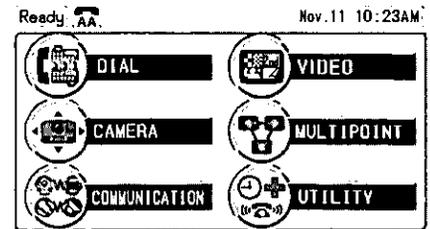
Normal ...When “Pan right” is pressed, the camera pans to one’s right.

When “Pan left” is pressed, the camera pans to one’s left.

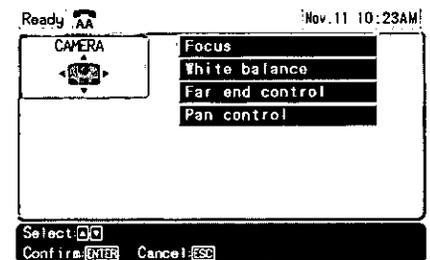
Reverse ...When “Pan right” is pressed, the camera pans to one’s left.

When “Pan left” is pressed, the camera pans to one’s right.

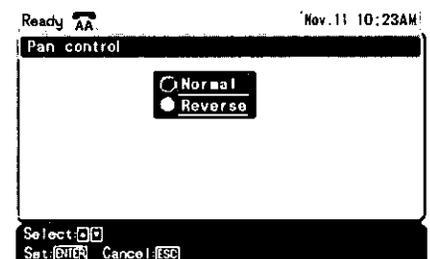
1. Press the **MENU** key.
Select “CAMERA” using the     cursor keys, and then press the **ENTER** key.



2. Select “Pan control” using the  cursor key, and then press the **ENTER** key.



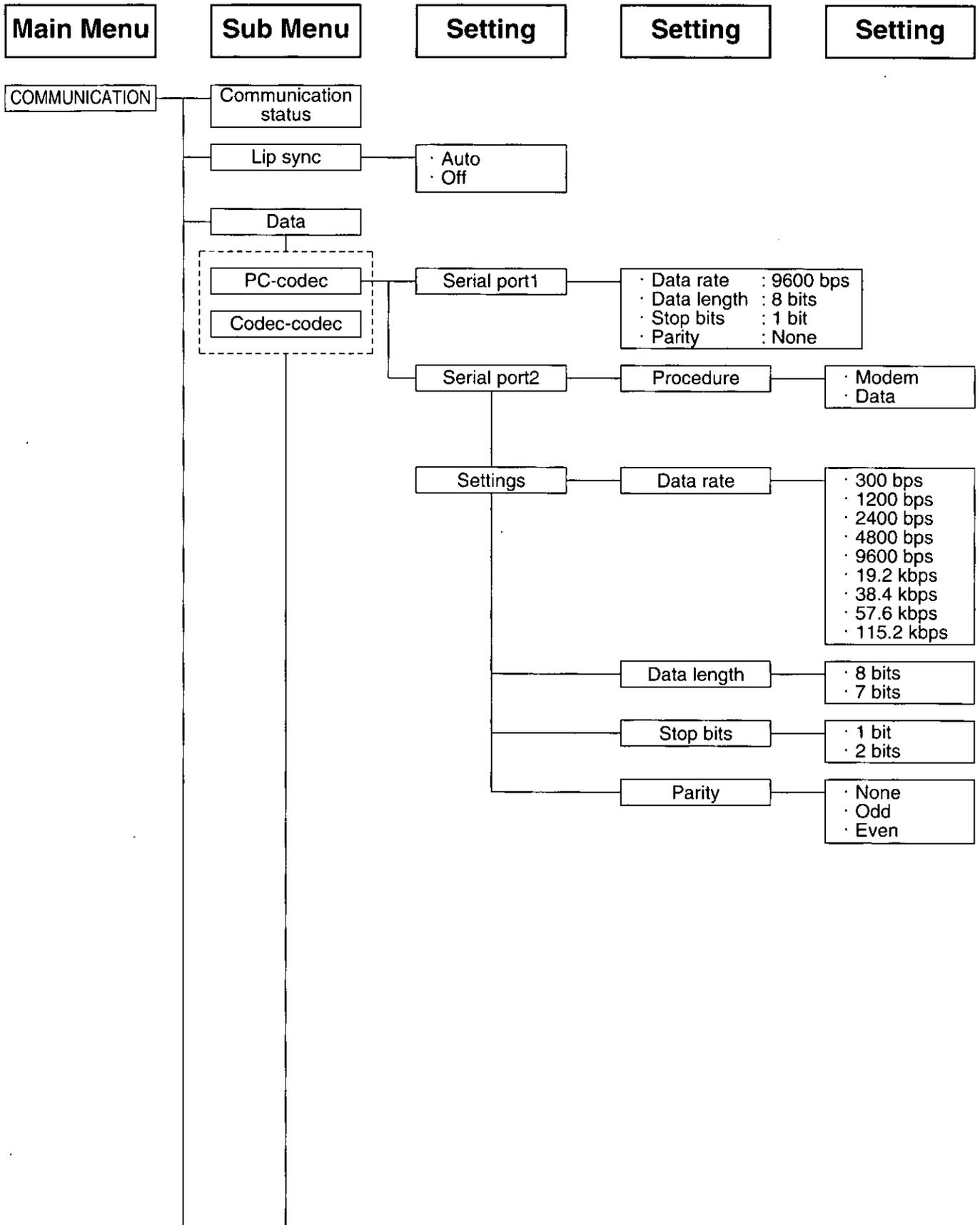
3. Select “Normal” or “Reverse” using the  cursor key, and then press the **ENTER** key.

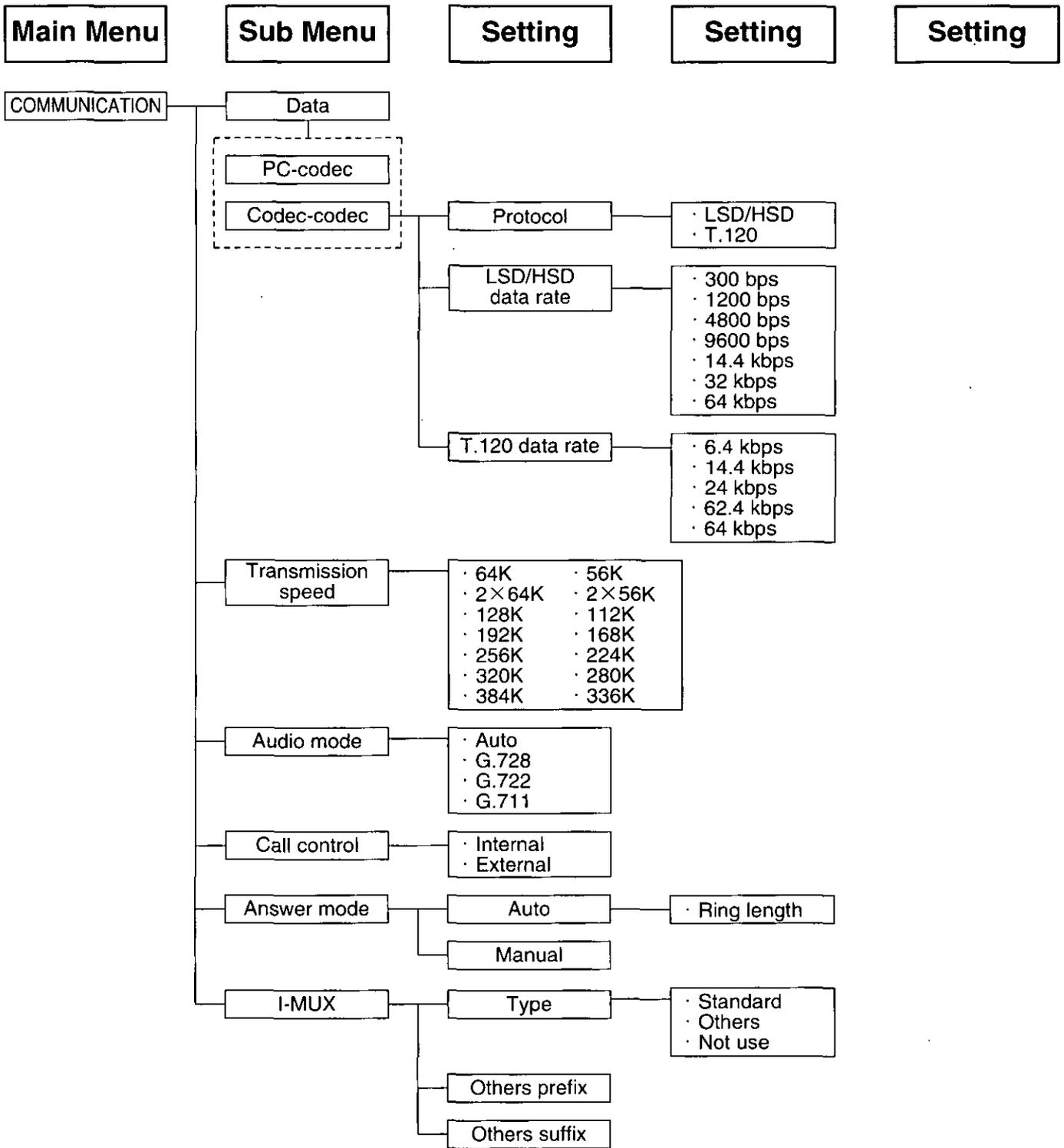


4. To quit, press the **MENU** key.

Communication Functions

[Communication Menu List]





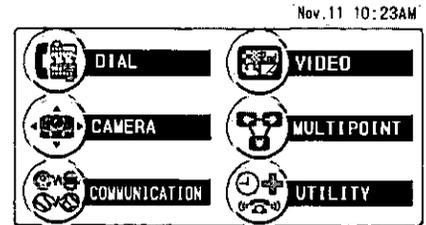
Communication Functions

■ Communication Status

Displays the current transmission speed, video mode, audio mode, data communication and other information.

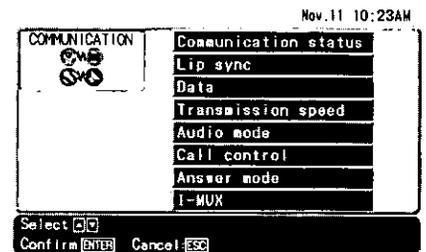
1. Press the **MENU** key.

Select "COMMUNICATION" using the     cursor keys, and then press the **ENTER** key.



2. Select "Communication status" using the  cursor key, and then press the **ENTER** key.

- The current communication status is displayed.

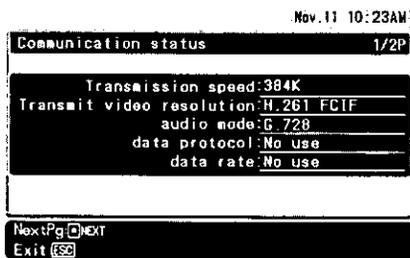


3. Select the page to be referenced.

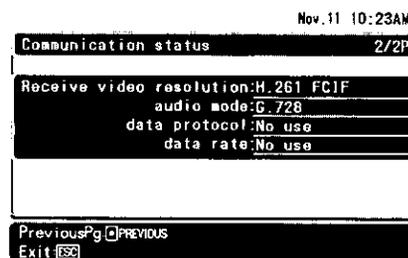
Press the  (NEXT PAGE) key.

Press the  (PREVIOUS PAGE) key.

(Page 1)



(Page 2)



4. To quit, press the **MENU** key.

Lip Sync

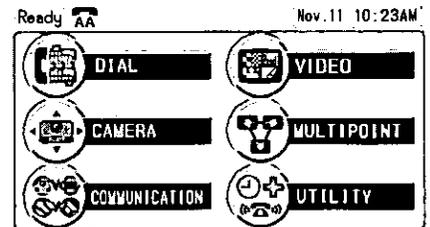
Synchronizing the sound and image.

AutoThe sound is synchronized with the image.

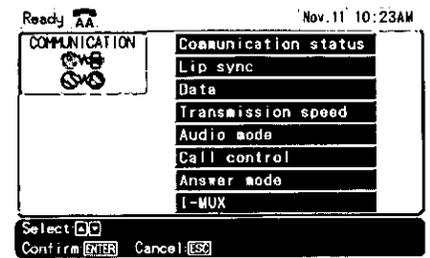
OffThe sound and image are not synchronized.

1. Press the **MENU** key.

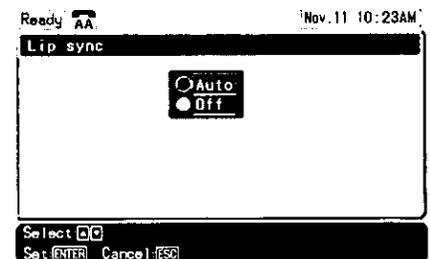
Select "COMMUNICATION" using the     cursor keys, and then press the **ENTER** key.



2. Select "Lip sync" using the  cursor key, and then press the **ENTER** key.



3. Select "Auto" or "Off" using the  cursor key, and then press the **ENTER** key.



4. To quit, press the **MENU** key.

Data

Data communication parameters.

PC-codecThe RS-232C Serial port is set.

Codec-codecData communication on the line is set.

Serial Port 1

Displays serial Port 1 setting (Cannot be changed).

Data rate9600 bps (fixed)

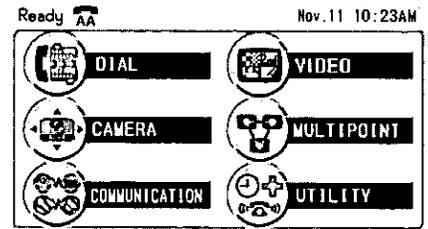
Data length8 bits (fixed)

Stop bits1 bit (fixed)

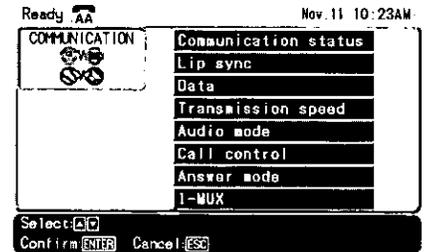
ParityNone (fixed)

1. Press the **MENU** key.

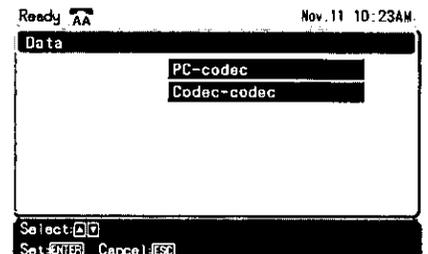
Select "COMMUNICATION" using the     cursor keys, and then press the **ENTER** key.



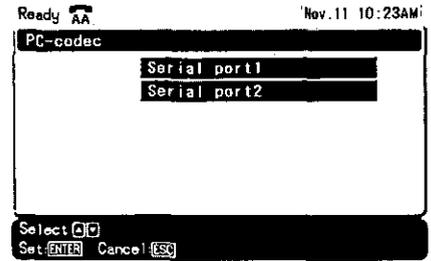
2. Select "Data" using the  cursor key, and then press the **ENTER** key.



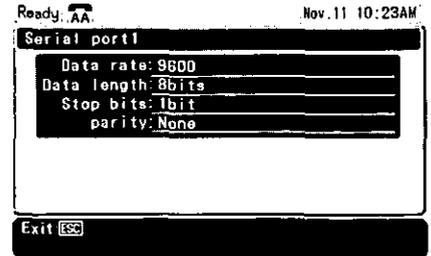
3. Select "PC-codec" using the  cursor key, and then press the **ENTER** key.



- Select "Serial port 1" using the  cursor key, and then press the **ENTER** key.

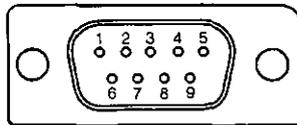


- The serial port 1 settings are now displayed. To quit, press the **MENU** key.



Details of serial port 1

By preparing applications using a personal computer, many of the unit's functions can be controlled from the personal computer via serial part 1.



D-Sub 9-pin plug

Pin layout

Pin No.	Signal Name	Description	Direction
1	CD	Data Terminal Ready (RS-232C port 1)	O
2	TX	Send Data (RS-232C port 1)	O
3	RX	Receive Data (RS-232C port 1)	I
4	DSR	Data Set Ready (RS-232C port 1)	I
5	GND	Ground (RS-232C port 1)	-
6	DTR	Data Terminal Ready (RS-232C port 1)	O
7	CTS	Clear to Send (RS-232C port 1)	I
8	RTS	Request to Send (RS-232C port 1)	O
9	-	Not connected (RS-232C port 1)	-

Note :

- For details, consult your dealer.

Communication Functions

• Serial Port 2

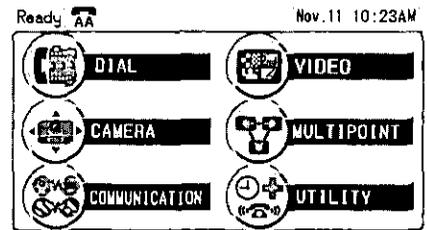
Data communication or a data conference settings.

ModemCodec communication control is exercised by the modem control commands from the PC.

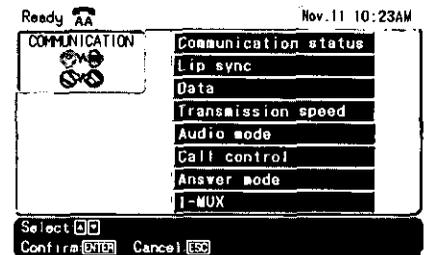
Data.....Data transfer mode.

1. Press the **[MENU]** key.

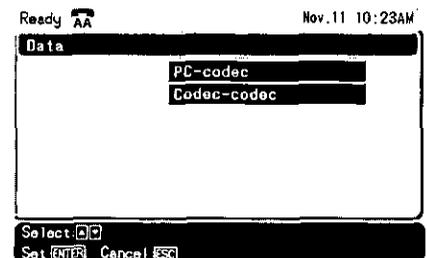
Select "COMMUNICATION" using the **[←]** **[→]** **[↑]** **[↓]** cursor keys, and then press the **[ENTER]** key.



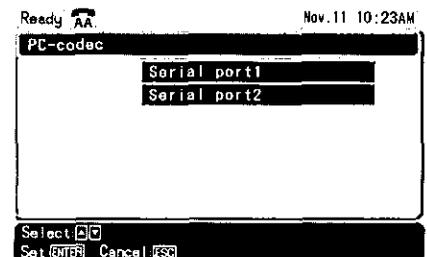
2. Select "Data" using the **[↓]** cursor key, and then press the **[ENTER]** key.



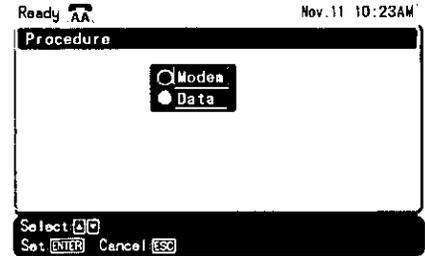
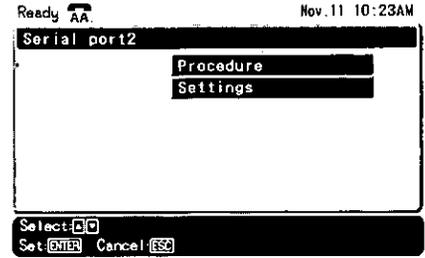
3. Select "PC-codec" using the **[↓]** cursor key, and then press the **[ENTER]** key.



4. Select "Serial port 2" using the **[↓]** cursor key, and then press the **[ENTER]** key.



5. Select "Procedure" using the  cursor key, and then press the **ENTER** key.



When the unit has been connected to a personal computer, this setting enables the unit to work as a modem.

The modem control commands are based on the AT commands.

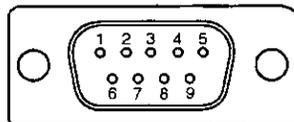
Refer to the list of AT commands on page 117

● **DATA :**

When the unit has been connected to a personal computer or control device, this setting enables the unit to transfer the data, which has been input to or output from the RS-232C port, straight to the line.

Details of serial port 2

Details of serial port 2



D-Sub 9-pin plug

Pin layout

Pin No.	Signal Name	Description	Direction
1	CD	Data Terminal Ready (RS-232C port 2)	O
2	TX	Send Data (RS-232C port 2)	O
3	RX	Receive Data (RS-232C port 2)	I
4	DSR	Data Set Ready (RS-232C port 2)	I
5	GND	Ground (RS-232C port 2)	-
6	DTR	Data Terminal Ready (RS-232C port 2)	O
7	CTS	Clear to Send (RS-232C port 2)	I
8	RTS	Request to Send (RS-232C port 2)	O
9	-	Not connected (RS-232C port 2)	-

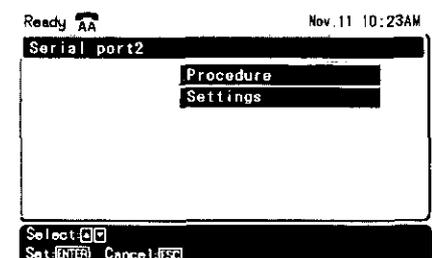
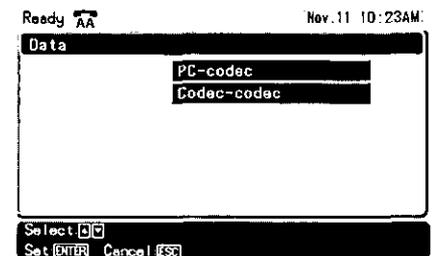
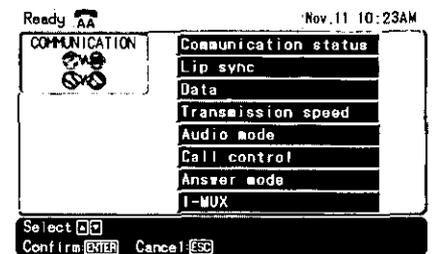
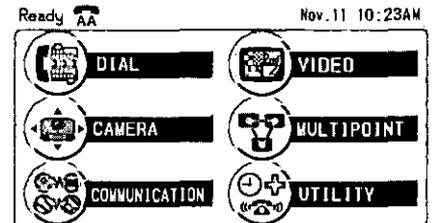
Communication Functions

Data rate

Transmission speed.

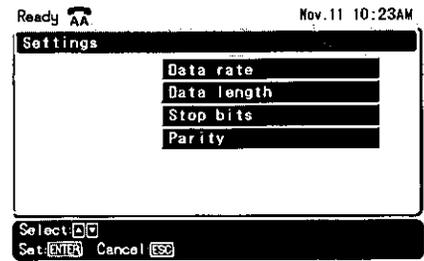
300 bps, 1200 bps, 2400 bps, 4800 bps, 9600 bps,
19.2 kbps, 38.4 kbps, 57.6 kbps, 115.2 kbps

1. Press the **MENU** key.
Select "COMMUNICATION" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.
2. Select "Data" using the **▼** cursor key, and then press the **ENTER** key.
3. Select "PC-codec" using the **▼** cursor key, and then press the **ENTER** key.
4. Select "Serial port 2" using the **▼** cursor key, and then press the **ENTER** key.
5. Select "Settings" using the **▼** cursor key, and then press the **ENTER** key.



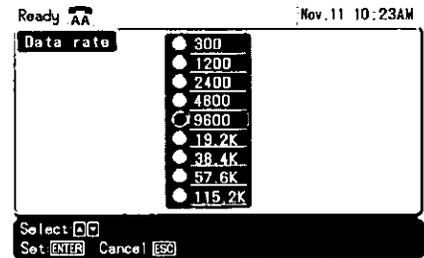
6. Select "Data rate" using the cursor key, and then press the key.

- Use the same data speed setting as that set on the PC connected.



7. Select the data rate using the cursor key, and then press the key.

- Use the same data rate setting as that set on the PC connected.



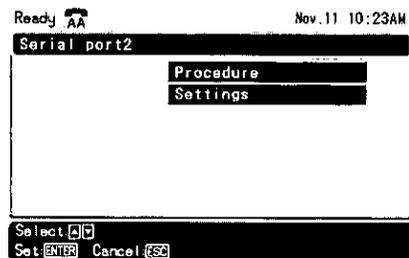
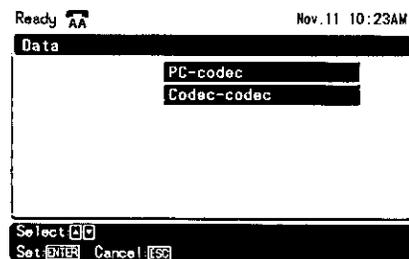
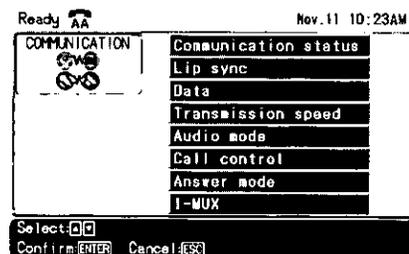
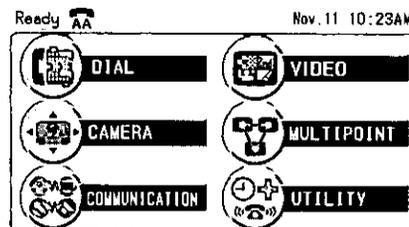
8. To quit, press the key.

Communication Functions

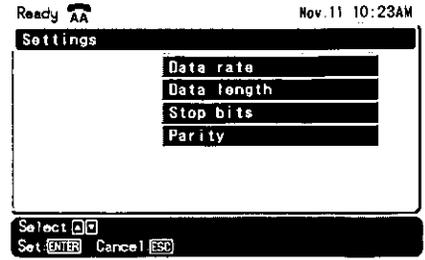
Data length

(8 bits or 7 bits)

1. Press the **[MENU]** key.
Select "COMMUNICATION" using the **[◀]** **[▶]** **[▲]** **[▼]** cursor keys, and then press the **[ENTER]** key.
2. Select "Data" using the **[▼]** cursor key, and then press the **[ENTER]** key.
3. Select "PC-codec" using the **[▼]** cursor key, and then press the **[ENTER]** key.
4. Select "Serial port 2" using the **[▼]** cursor key, and then press the **[ENTER]** key.
5. Select "Settings" using the **[▼]** cursor key, and then press the **[ENTER]** key.

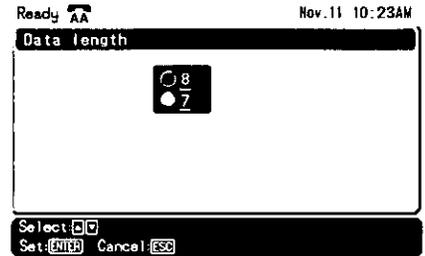


6. Select "Data length" using the  cursor key, and then press the **ENTER** key.



7. Select the data length using the  cursor key, and then press the **ENTER** key.

- Use the same data length setting as that set on the PC connected.



8. To quit, press the **MENU** key.

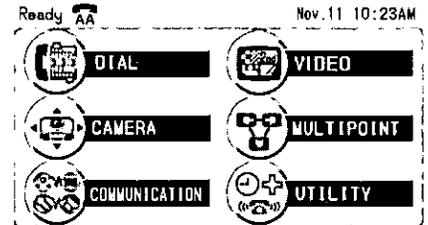
Communication Functions

Stop bit

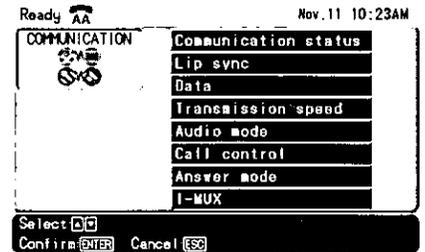
(1 bit or 2 bits)

1. Press the **MENU** key.

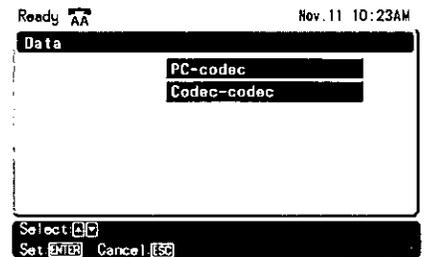
Select "COMMUNICATION" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



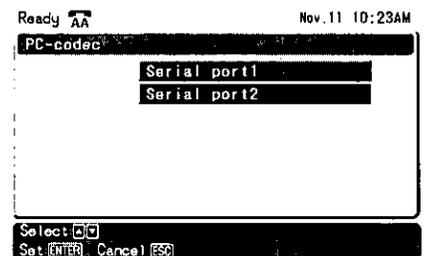
2. Select "Data" using the **▼** cursor key, and then press the **ENTER** key.



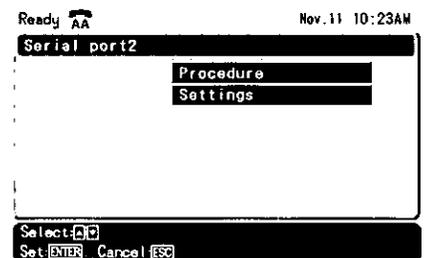
3. Select "PC-codac" using the **▼** cursor key, and then press the **ENTER** key.



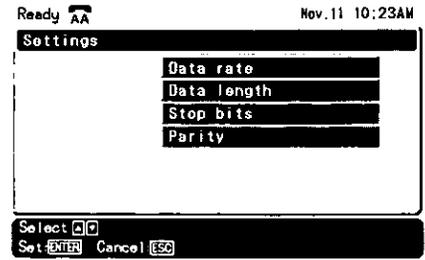
4. Select "Serial port 2" using the **▼** cursor key, and then press the **ENTER** key.



5. Select "Settings" using the **▼** cursor key, and then press the **ENTER** key.

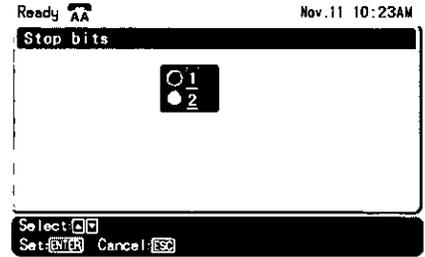


6. Select "Stop bits" using the  cursor key, and then press the **ENTER** key.



7. Select the number of stop bits using the  cursor key, and then press the **ENTER** key.

- Use the same stop bits setting as that set on the PC connected.



8. To quit, press the **MENU** key.

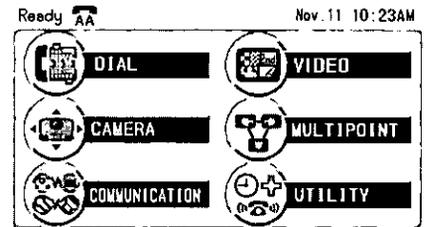
Communication Functions

Parity

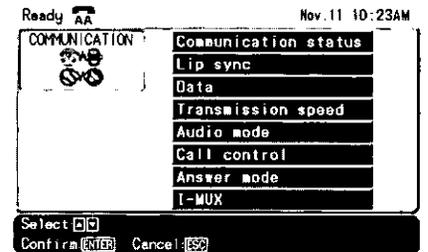
(None, Odd, Even)

1. Press the **MENU** key.

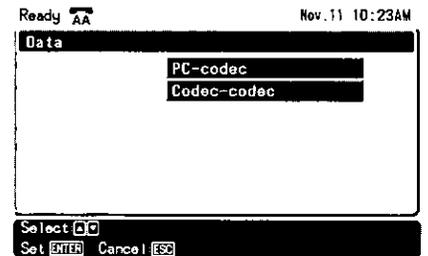
Select "COMMUNICATION" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



2. Select "Data" using the **▼** cursor key, and then press the **ENTER** key.



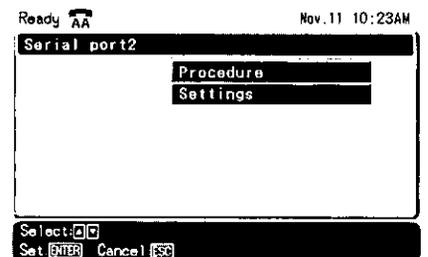
3. Select "PC-codec" using the **▼** cursor key, and then press the **ENTER** key.



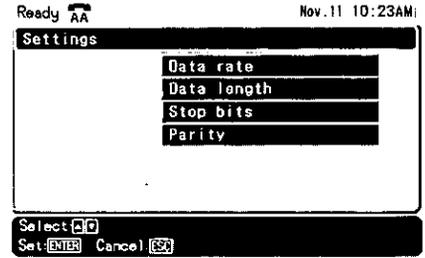
4. Select "Serial port 2" using the **▼** cursor key, and then press the **ENTER** key.



5. Select "Settings" using the **▼** cursor key, and then press the **ENTER** key.

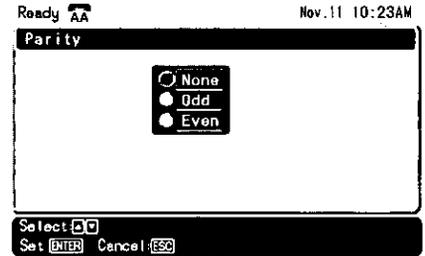


6. Select "Parity" using the cursor key, and then press the **ENTER** key.



7. Select the parity using the cursor key, and then press the **ENTER** key.

- Use the same parity setting as that set on the PC connected.



8. To quit, press the **MENU** key.

Communication Functions

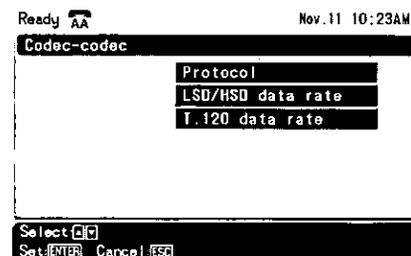
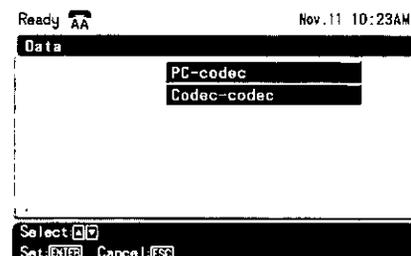
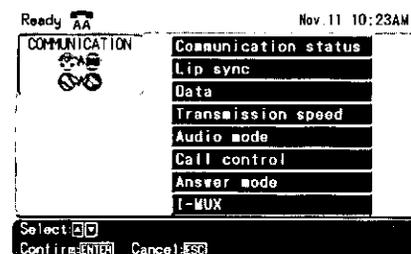
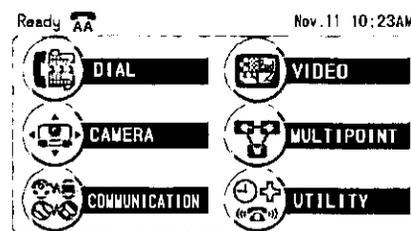
• Protocol

Data communications protocol.

LSD/HSDThe low-speed / high-speed data communications protocol is used for data communication.

T.120The data conference protocol is used for data communication.
Select T.120 when an application complying with the ITU-T T.120 standard is to be used.

1. Press the **[MENU]** key.
Select "COMMUNICATION" using the **[◀]** **[▶]** **[▲]** **[▼]** cursor keys, and then press the **[ENTER]** key.
2. Select "Data" using the **[▼]** cursor key, and then press the **[ENTER]** key.
3. Select "Codec-codec" using the **[▼]** cursor key, and then press the **[ENTER]** key.
4. Select "Protocol" using the **[▼]** cursor key, and then press the **[ENTER]** key.
5. Select the data protocol using the **[▼]** cursor key, and then press the **[ENTER]** key.
 - Use same protocol setting at the both ends.
6. To quit, press the **[MENU]** key.



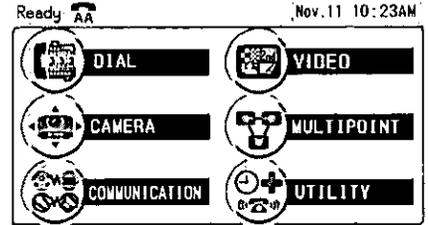
● LSD/HSD Data Rate

LSD/HSD data transmission speed.

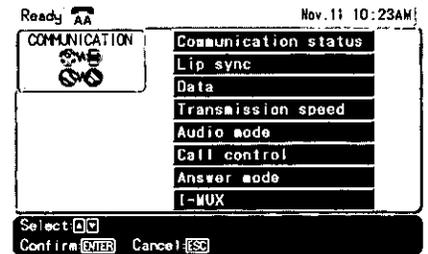
(300 bps, 1200 bps, 4800 bps, 9600 bps, 14.4 kbps, 32 kbps, 64 kbps)

1. Press the **[MENU]** key.

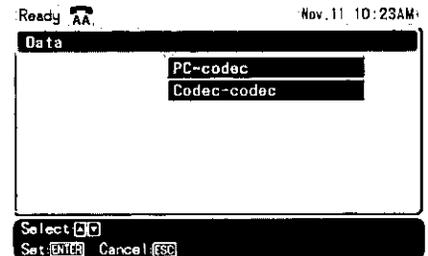
Select "COMMUNICATION" using the **[◀]** **[▶]** **[▲]** **[▼]** cursor keys, and then press the **[ENTER]** key.



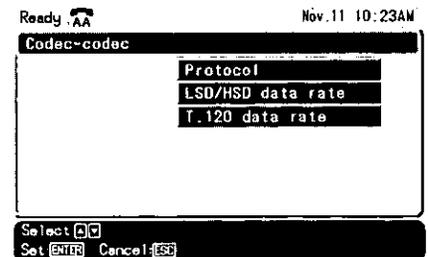
2. Select "Data" using the **[▼]** cursor key, and then press the **[ENTER]** key.



3. Select "Codec-codec" using the **[▼]** cursor key, and then press the **[ENTER]** key.



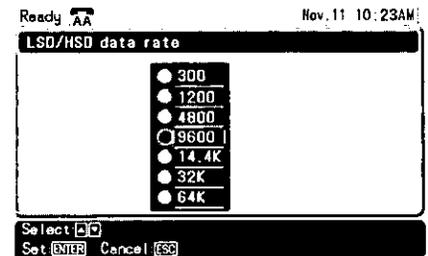
4. Select "LSD/HSD data rate" using the **[▼]** cursor key, and then press the **[ENTER]** key.



5. Select the data rate using the **[▼]** cursor key, and then press the **[ENTER]** key.

- The data rate is restricted by the sound mode and transmission speed. Refer to the table of available data rate on page 120.
- Use same data rate setting at the both ends.
- Actual data rate may be different from this setting according to other party's capability.

Refer to the communication status sub menu and confirm the actual data rate.



6. To quit, press the **[MENU]** key.

Communication Functions

• T.120 Data Rate

T.120 data transmission speed.

(6.4kbps, 14.4kbps, 24kbps, 62.4kbps, 64kbps)

1. Press the **MENU** key.

Select "COMMUNICATION" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.

2. Select "Data" using the **▼** cursor key, and then press the **ENTER** key.

3. Select "Codec-codec" using the **▼** cursor key, and then press the **ENTER** key.

4. Select "T.120 data rate" using the **▼** cursor key, and then press the **ENTER** key.

5. Select the data rate using the **▼** cursor key, and then press the **ENTER** key.

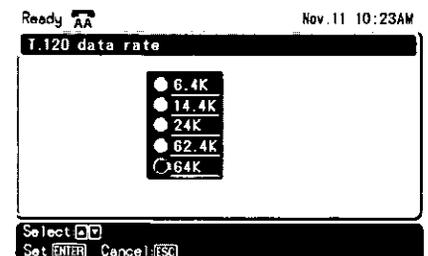
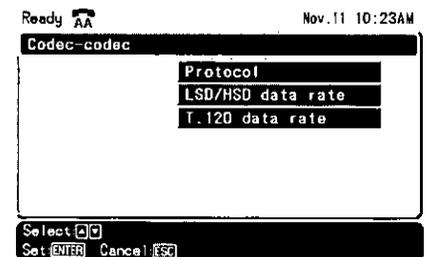
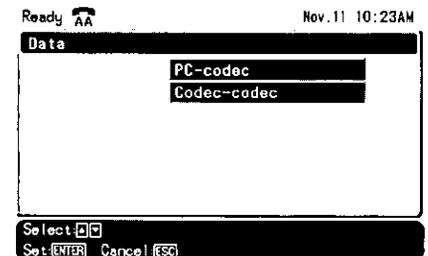
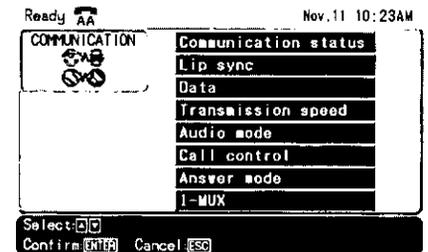
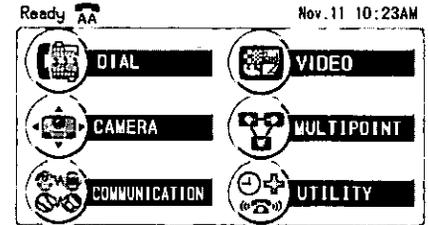
- The data rate is restricted by the sound mode and transmission speed. Refer to the table of available data rate on page 120.

- Use same data rate setting at the both ends.

- Actual data rate may be different from this setting according to other party's capability.

Refer to the communication status sub menu and confirm the actual data rate.

6. To quit, press the **MENU** key.



● T.120 Data Communication Connection Procedure

Step 1 : Connect the PC and Codec by following the steps on page 7 of the Installation Manual.

Step 2 : Set the communication data parameters of the Codec.

- Data protocolSelect T.120 (refer to page 72)
- T.120 data rateSelect the same rate at the both ends of the communication
(refer to pages 74 and 120)
- Serial port 2 ProcedureSelect Modem (refer to page 62)
- Serial port 2 settingsSelect settings and press ENTER
 - Data rateSame setting as for connected PC (refer to page 64) 115.2K is recommended
 - Data lengthSet to 8 (refer to page 66) for the setting method
 - Stop bitSet to 1 (refer to page 68)
 - ParitySet to none (refer to page 70)

Step 3 : PC setup.

- Modem deviceAdd "Standard 28800bps modem" (for communication port 1 or 2)
- Modem properties
- Setting the communication (serial) port
 - PortSet to the number corresponding to the port where the serial cable is connected
 - Data rateSame setting as for Codec (115.2K)
 - Data lengthSame setting as for Codec
 - Stop bitSame setting as for Codec
 - ParitySame setting as for Codec

* Using the detailed settings, set "Use FIFO buffer" for the port and "Use flow control (hardware)" for the connections.

Communication Functions

Step 4 : Start communication between the Codecs (refer to page 31 for the communication method).

Step 5 : Start up the PC software program and check the settings.

(Refer to the manual of the PC software program for details on how to set and operate the PC software program.)

Checking the Tool Options settings

● ProtocolModem (use the modem which was set in Step 3)

● Modem properties

PortSet to the number corresponding to the port where the serial cable is connected

Data rateSame setting as for Codec

Data lengthSame setting as for Codec

Stop bitSame setting as for Codec

ParitySame setting as for Codec

* When Microsoft NetMeeting is used as the PC software program, "Use modem to answer incoming call" must be selected as the Incoming Calls setting.

* Using the detailed settings, set "Use FIFO buffer" for the port and "Use flow control (hardware)" for the connections.

Step 6: Complete the connections by originating a PC software program call.

* When Microsoft NetMeeting is used as the PC software program, "modem" must be selected as the Call Using setting.

Check that the same settings as in Step 5 are used as modem protocol properties before originating a call.

Note :

- T.120 data communication is supported when data is communicated between two KXC-M7800 units.
- “Microsoft NetMeeting Ver2.0” is recommended as the T.120 PC software program.
- Since “Microsoft NetMeeting Ver2.1” does not support a modem, data communication is not possible with the KXC-M7800.
- When the automatic call reception is not set in the call reception settings of the PC software program, connection will not be possible unless calls are received manually.
- During T.120 data communication, the image may be frozen depending on the communication speed.
- An error message (Rate is not available) may appear when the data communication in Step 6 is started. In a case like this, change the T.120 data rate and originate the call again. (Refer to page 120)

■ Transmission Speed

Setting the transmission speed.

(64K, 2×64K, 128K, 192K, 256K, 320K, 384K)
 (56K, 2×56K, 112K, 168K, 224K, 280K, 336K)

1. Press the **[MENU]** key.
 Select "COMMUNICATION" using the **[◀]** **[▶]** **[▲]** **[▼]** cursor keys, and then press the **[ENTER]** key.

2. Select "Transmission speed" using the **[▼]** cursor key, and then press the **[ENTER]** key.

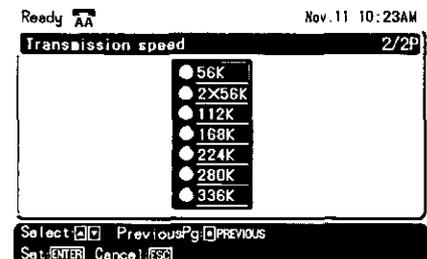
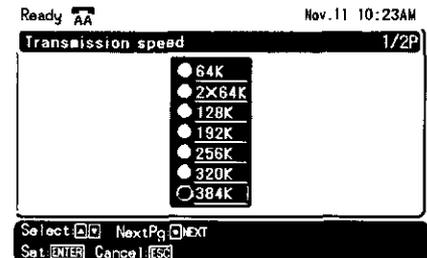
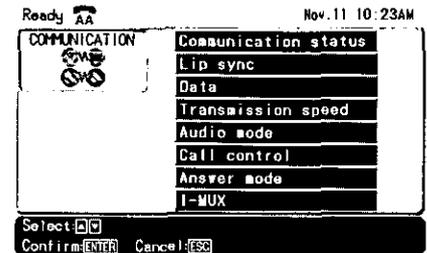
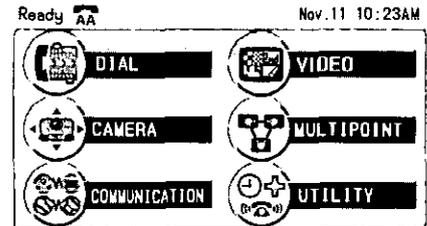
3. Select transmission speed setting using the **[▼]** cursor key, and then press the **[ENTER]** key.

- Press the **[▶]** (NEXT PAGE) key.
- Press the **[◀]** (PREVIOUS PAGE) key.

4. To quit, press the **[MENU]** key.

Note :

- Actual transmission speed may be different from this setting according to other party's capability. Refer to the Communication status sub menu and confirm the actual speed.
- When 56Kbps network in the United States is used for communication, connection may not be established with 64K, 2×64K, 128K, 192K, 256K, 320K or 384Kbps setting. In this case change the setting to 56K, 2×56K, 112K, 168K, 224K, 280K or 336Kbps and try again.
 Also if TA/CSU has setting of 56K or 64kbps, it should be 56Kbps.

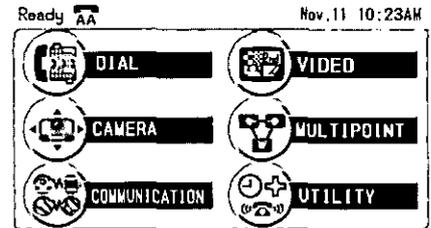


Audio Mode

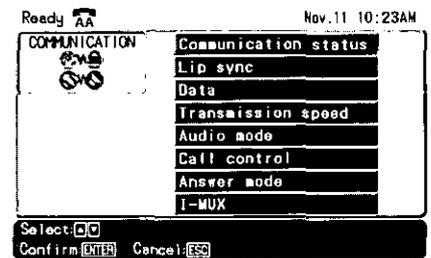
Setting the audio mode at which data is to be transmitted.

- AutoThe best audio mode is automatically determined.
- G.728The audio mode is set to G.728.
- G.722The audio mode is set to G.722.
- G.711The audio mode is set to G.711.

1. Press the **[MENU]** key.
 Select "COMMUNICATION" using the **[◀] [▶] [▲] [▼]** cursor keys, and then press the **[ENTER]** key.

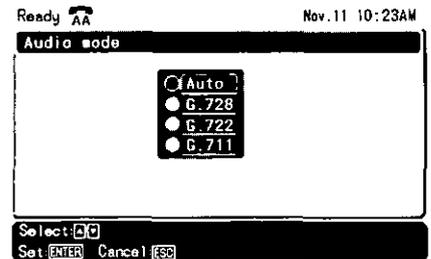


2. Select "Audio mode" using the **[▼]** cursor key, and then press the **[ENTER]** key.



3. Select the audio mode using the **[▼]** cursor key, and then press the **[ENTER]** key.

- Actual audio mode may be different from this setting according to other party's capability. Refer to the communication status sub menu and confirm the actual mode.



4. To quit, press the **[MENU]** key.

Communication Functions

■ Call Control

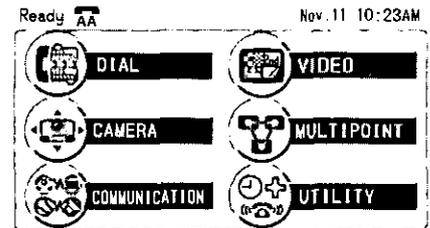
Dialing mode according to the connected CSU.

InternalX.21, V.35 with RS-366, RS-449 with RS-366

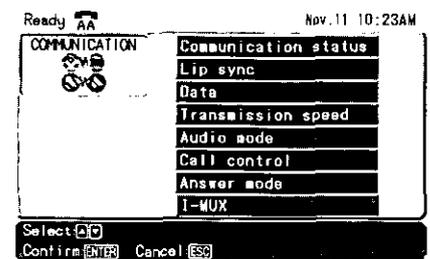
ExternalV.35/RS-449 without RS-366

1. Press the **MENU** key.

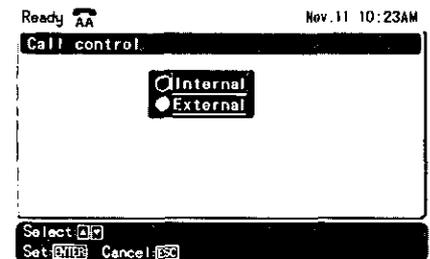
Select "COMMUNICATION" using the     cursor keys, and then press the **ENTER** key.



2. Select "Call control" using the  cursor key, and then press the **ENTER** key.



3. Select "Internal" or "External" call control using the  cursor key, and then press the **ENTER** key.



4. To quit, press the **MENU** key.

Answer Mode

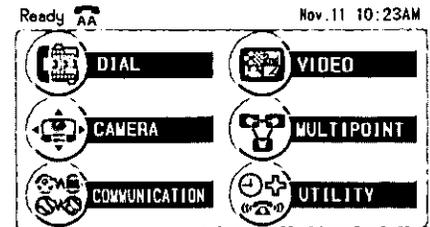
Call reception setting, automatic or manual.

AutoThe incoming call tone is activated for the designated number of rings (0 to 9) , and the call is received automatically.

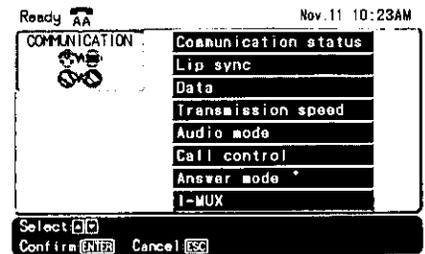
ManualThe call is received manually.

1. Press the **[MENU]** key.

Select "COMMUNICATION" using the **[Left]** **[Right]** **[Up]** **[Down]** cursor keys, and then press the **[ENTER]** key.



2. Select "Answer mode" using the **[Down]** cursor key, and then press the **[ENTER]** key.

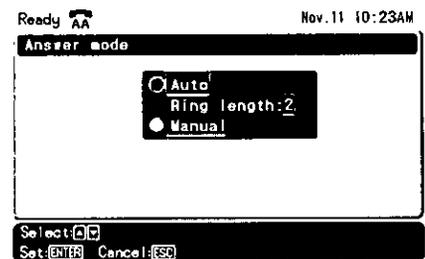


3. Select "Auto" or "Manual" answer mode using the **[Down]** cursor key.

● When "Auto" is selected :

Use the number keys (0 to 9) to input the number of rings (0 to 9) until the call is received automatically.

Then press the **[ENTER]** key.



4. To quit, press the **[MENU]** key.

Note :

- Answer Mode is only valid if Call Control is set to Internal. However, priority is given to the answer setting for the connected TA/CSU, so it becomes valid and active within that setting range. (It may not be possible to answer a call outside the TA/CSU setting range.)

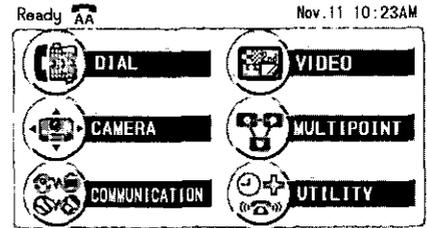
Communication Functions

I-MUX

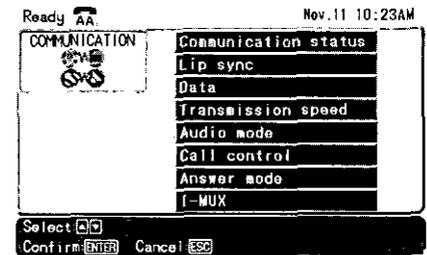
- TypeSets the I-MUX type and whether it is to be used.
- Other prefixSets the prefix to be added to the dialing number.
- Other suffixSets the suffix to be added to the dialing number.

1. Press the **[MENU]** key.

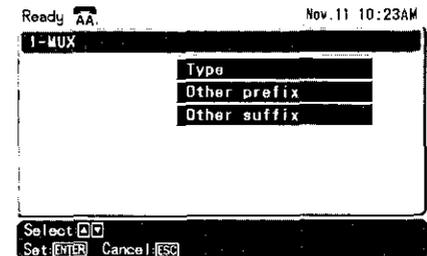
Select "COMMUNICATION" using the **[Left]** **[Right]** **[Up]** **[Down]** cursor keys, and then press the **[ENTER]** key.



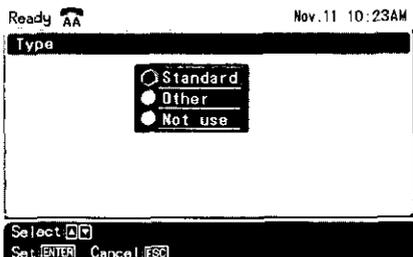
2. Select "I-MUX" using the **[Down]** cursor key, and then press the **[ENTER]** key.



3. Select the item to be set using the **[Down]** cursor key, and then press the **[ENTER]** key.



● When "Type" is selected :
Sets the I-MUX type and whether it is to be used.



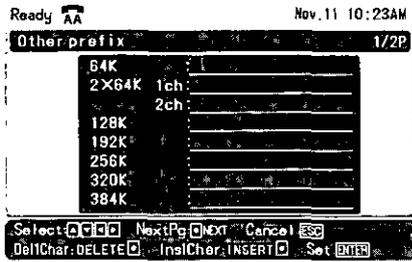
- Standard : When ADTRAN ISU512 is used
- Other : When any other I-MUX is to be used and the prefix and suffix are to be set
- Not use : When any other I-MUX or TA/CSU is to be used and the prefix and suffix are not to be set

- When "Other prefix" is selected :
Sets the prefix to be added to the dialing number.
- Refer to the procedure for inputting characters. (See page 24)

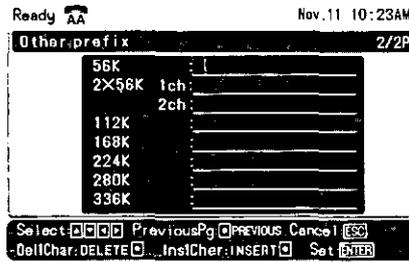
- Press the  (NEXT PAGE) key.
- Press the  (PREVIOUS PAGE) key.

(Valid when "Other" has been set as the I-MUX type.)

(Page 1)



(Page 2)

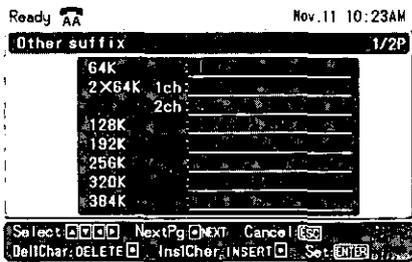


- When "Other suffix" is selected :
Sets the suffix to be added to the dialing number.
- Refer to the procedure for inputting characters. (See page 24)

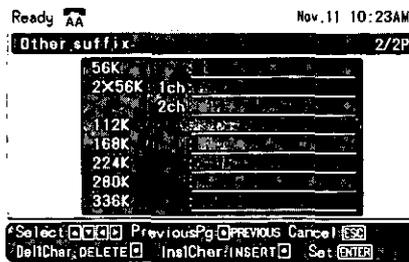
- Press the  (NEXT PAGE) key.
- Press the  (PREVIOUS PAGE) key.

(Valid when "Other" has been set as the I-MUX type.)

(Page 1)

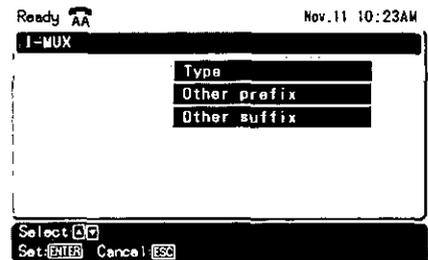


(Page 2)



4. Then press the  key.

5. To quit, press the  key.



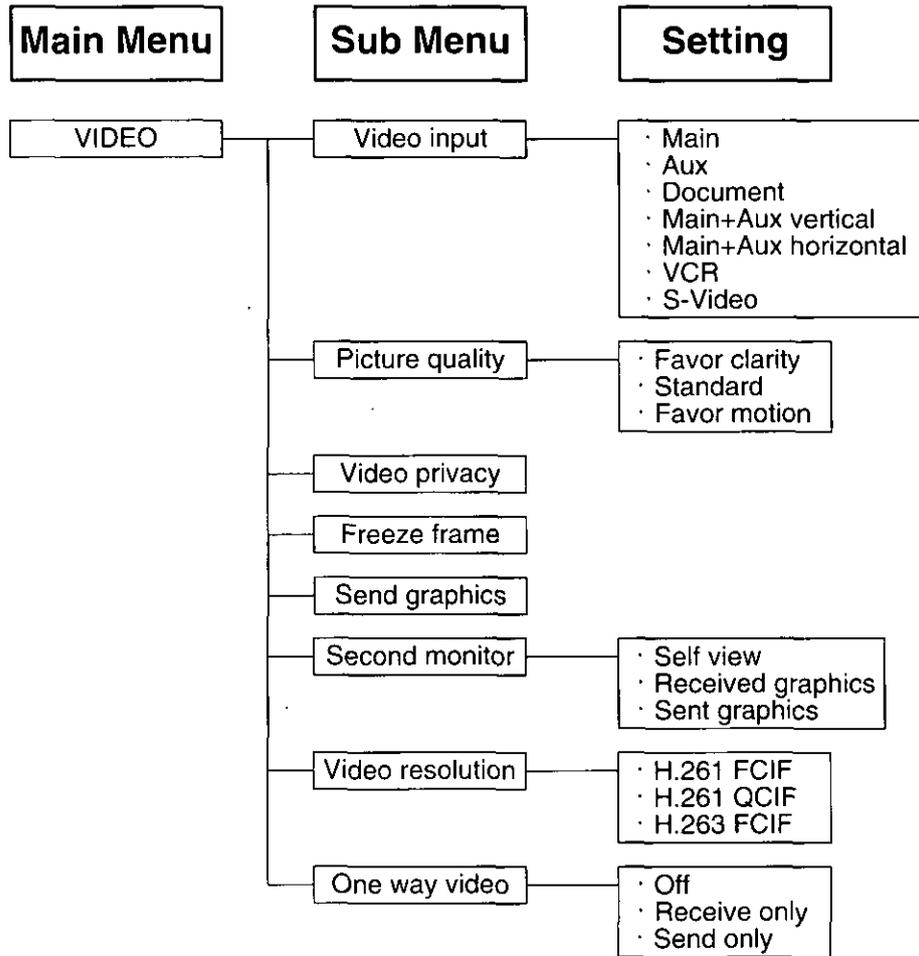
Note :

- The required prefix and suffix are determined according to the I-MUX being used. See the I-MUX manual for details.
- It may not be possible to place a call if an unnecessary prefix or suffix is set.



Video Functions

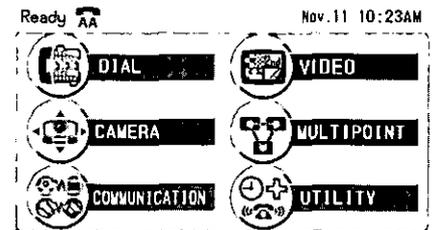
[Video Menu List]



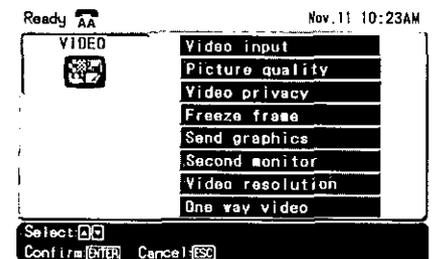
Video Input

- MainMAIN CAMERA video is displayed.
- AuxAUX CAMERA video is displayed.
- DocumentThe image from the Document CAMERA is displayed.
- Main+Aux VerticalThe images from the MAIN CAMERA and AUX CAMERA is divided into two halves with one image shown in the left half and the other shown in the right half.
 - Left half of the screen : Image from MAIN CAMERA 
 - Right half of the screen : Image from AUX CAMERA 
- Main+Aux HorizontalThe image from the MAIN CAMERA and AUX CAMERA is divided into two halves with one image shown in the top half and the other shown in the bottom half.
 - Top half of the screen : Image from MAIN CAMERA 
 - Bottom half of the screen : Image from AUX CAMERA 
- VCRVCR video is displayed.
- S-VideoS-Video is displayed.

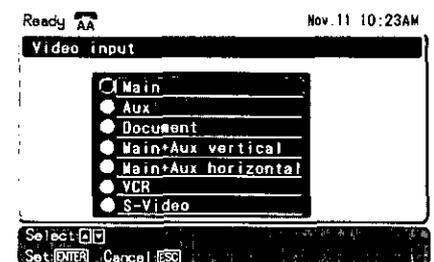
1. Press the **[MENU]** key.
 Select "VIDEO" using the **[Left]** **[Right]** **[Up]** **[Down]** cursor keys, and then press the **[ENTER]** key.



2. Select "Video input" using the **[Down]** cursor key, and then press the **[ENTER]** key.



3. Select video input setting using the **[Down]** cursor key, and then press the **[ENTER]** key.



4. To quit, press the **[MENU]** key.

Picture Quality

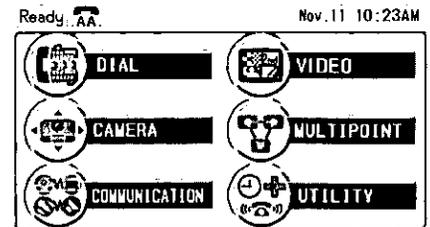
Picture quality of the image being sent.

Favor clarityPriority is given to the picture quality of the sending image.

StandardThe standard picture quality is set.

Favor motionPriority is given to the motion of the sending image.

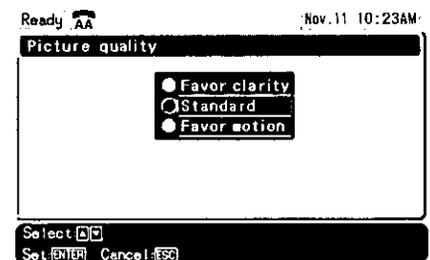
1. Press the **MENU** key.
 Select "VIDEO" using the **◀ ▶ ▲ ▼** cursor keys,
 and then press the **ENTER** key.



2. Select "Picture quality" using the **▼** cursor key, and
 then press the **ENTER** key.



3. Select picture quality setting using the **▼** cursor key,
 and then press the **ENTER** key.



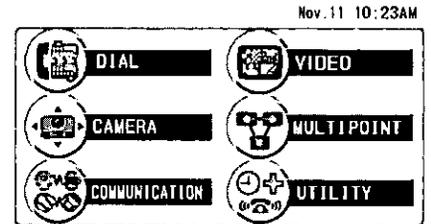
4. To quit, press the **MENU** key.

Video Privacy

Temporarily stops the transmission of the video image during a call.

1. Press the **MENU** key.

Select "VIDEO" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.

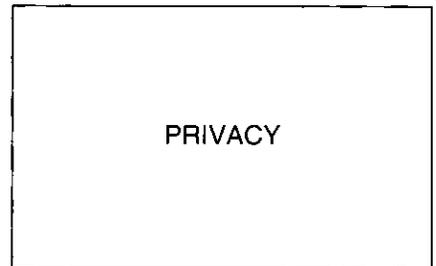


2. Select "Video privacy" using the **▼** cursor key, and then press the **ENTER** key.



3. Perform the same operation again to cancel video privacy.

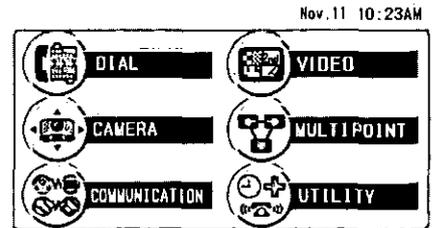
- When privacy is established, the PIP screen is frozen, and the video image transmitted is set to the **PRIVACY** display.



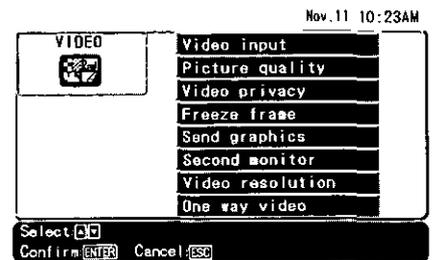
Freeze Frame

The transmission image on the screen is frozen.

1. Press the **MENU** key.
Select "VIDEO" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



2. Select "Freeze frame" using the **▼** cursor key, and then press the **ENTER** key.



3. Perform the same operation again to cancel freeze frame.

Note :

- The video input can be switched during freeze frame but the screen will be switched only after freeze frame is released.

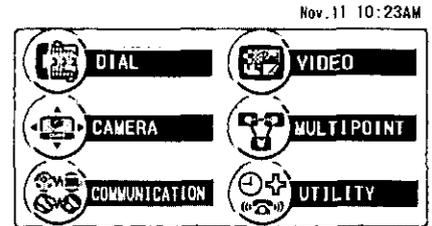
■ Send Graphics

Transmitting a high-definition still image to the other party.

* The high-definition still image appears on monitor 2, and the self image being transmitted is frozen momentary on the screen of monitor 1.

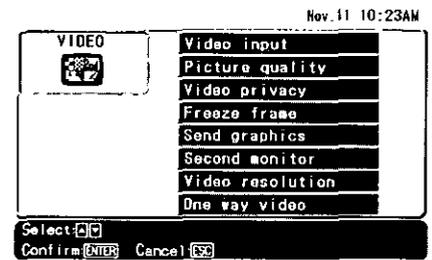
1. Press the **MENU** key.

Select "VIDEO" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



2. Select "Send graphics" using the **▼** cursor key, and then press the **ENTER** key.

- "Sending graphics" is displayed until the transmission of the still image is completed.
- This function cannot be used during communication when Video Resolution set to H.263 or H.261 QCIF.
- Self view is displayed temporarily when graphics are being sent or received. (During sending, the image is the same as the "Sending graphics".)



Note :

- "Receiving graphics" is displayed while a still image is being received.
- Transmission or reception may fail when still images are sent at the same time from both terminals.

Second Monitor

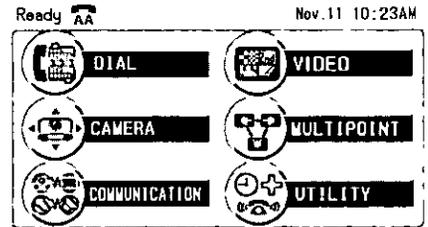
Switching the image to be displayed on monitor 2.

Self viewThe self image is displayed.

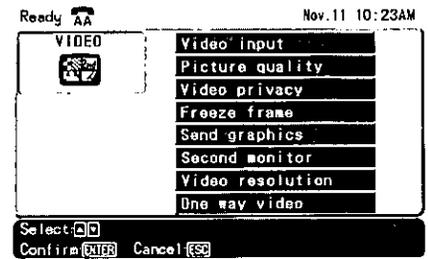
Received graphicsThe still image at the receiving end is displayed.

Sent graphicsThe still image at the transmission end is displayed.

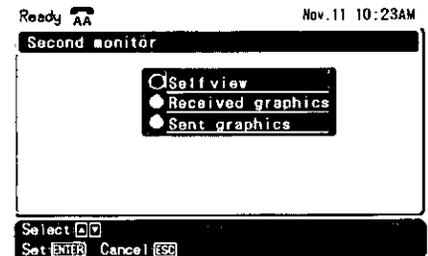
1. Press the **MENU** key.
Select "VIDEO" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



2. Select "Second monitor" using the **▼** cursor key, and then press the **ENTER** key.



3. Select the second monitor mode using the **▼** cursor key, and then press the **ENTER** key.



4. To quit, press the **MENU** key.
 - If "Received graphics" or "Sent graphics" is selected for the second monitor, the selected graphics will be temporarily displayed on the monitor 1 (except when self image is displayed.)

Note :

- The default "Self view" will be set when the call is disconnected or the power is turned off.
- When a still image has been sent or received, the monitor will automatically be set to "sent graphics" or "received graphics."

Video Functions

Video Resolution

Transmitted image format and resolution.

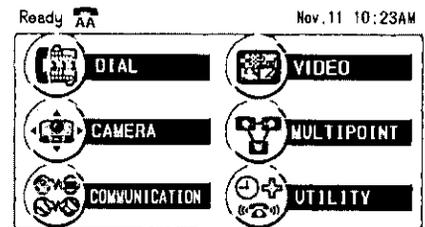
H.261 FCIF.....The H.261 format is used to transmit the image, and the resolution is set to FCIF.

H.261 QCIFThe H.261 format is used to transmit the image, and the resolution is set to QCIF.

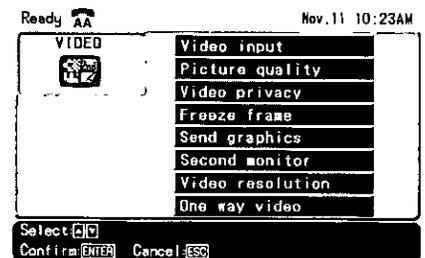
H.263 FCIF.....The H.263 format is used to transmit the image, and the resolution is set to FCIF (For transmission speeds up to 192K).

1. Press the **MENU** key.

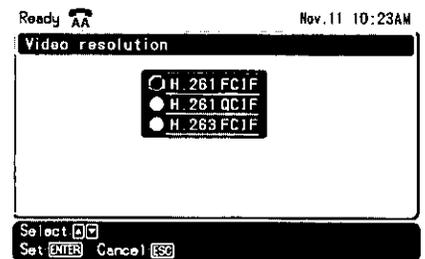
Select "VIDEO" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



2. Select "Video resolution" using the **▼** cursor key, and then press the **ENTER** key.



3. Select transmission format using the **▼** cursor key, and then press the **ENTER** key.



4. To quit, press the **MENU** key.

Note :

- The setting cannot be changed while communication is in progress.
- Actual video resolution is different from this setting according to other party's capability. Refer to the communication status sub menu and confirm actual video resolution.

One Way Video

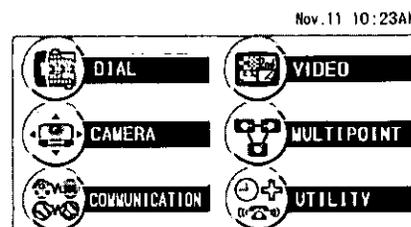
OffThe image and sound is transmitted and received.

Receive onlyThe image is received video only. (No sound)

Send only.....The image is transmitted video only. (No sound)

1. Press the **MENU** key.

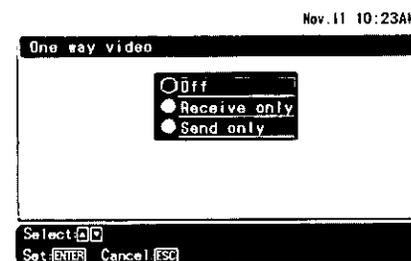
Select "VIDEO" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



2. Select "One way video" using the **▼** cursor key, and then press the **ENTER** key.



3. Select the One way video mode using the **▼** cursor key, and then press the **ENTER** key.



4. To quit, press the **MENU** key.

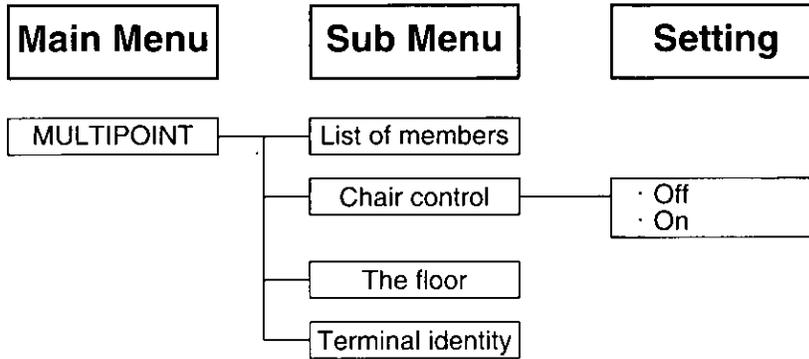
Note :

- One way video mode only works during communication between one KXC-M7800 unit and another.
- At the receive end of One way video, transmitting audio is forced mute condition and operation of **MUTE** key is not available.



Multipoint Functions

[Multipoint Menu List]



Note :

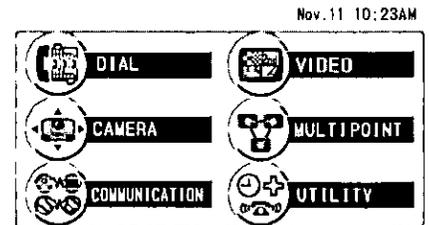
- Some functions are not supported by certain MCUs.
- With certain MCUs, it is necessary to set the functions on the MCU end as well.
(Check with your MCU service company.)

List of Members

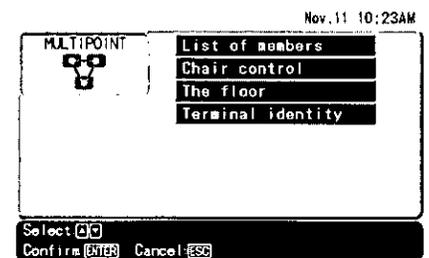
This function is used for referencing a list of the conference participants, for conference control (video switching, terminal disconnection, etc.) by the Chair, and for reception of the specified video by participants other than the Chair.

1. Press the **MENU** key.

Select "MULTIPOINT" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



2. Select "List of members" using the **▼** cursor key, and then press the **ENTER** key.



Chair terminal

Self	Chair	Floor	MCU	Term	Identity
●	▲	▶	1	1	Atlanta
			1	2	Dallas
▶		123	456		LosAngeles
▶		1	4		NewYork
		1	5		Alaska
▶		1	6		Hawaii

Broadcast **ENTER** Receive **RECV** Release **RLS**
Clear **ALT** Drop **DELETE**

Other terminals

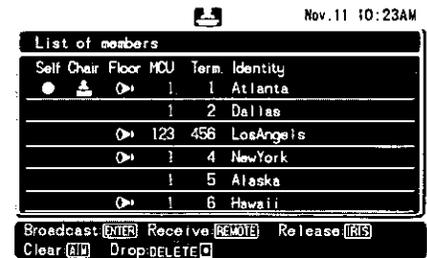
Self	Chair	MCU	Term	Identity
	▲	1	1	Atlanta
		1	2	Dallas
●		123	456	LosAngeles
		1	4	NewYork
		1	5	Alaska
		1	6	Hawaii

Broadcast **ENTER** Receive **RECV** Release **RLS**

- SelfLocal terminal
- ChairChairperson
- FloorRequested for speaking authority
- MCUMCU (Multipoint Control Unit) number
- TermTerminal number
- IdentityTerminal name
- BroadcastSpecifying the terminal that will send video/audio
- ReceiveSpecifying the terminal that will receive the video
- ReleaseReleasing a terminal from video transmission or video reception
- ClearCanceling requests for speaking authority
- DropTo disconnect a terminal (Only from the Chair's terminal.)

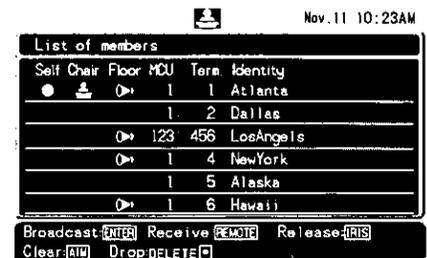
• Broadcast

On the "List of Members" screen, use the  cursor keys to select the terminal that is to send the video, and then press the **ENTER** key.



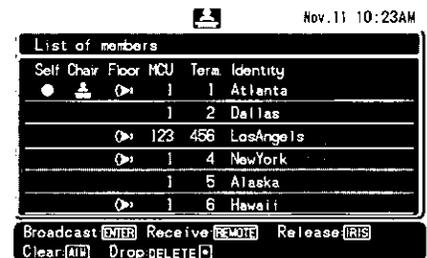
• Receive

On the "List of Members" screen, use the  cursor keys to select the terminal that is to receive the video, and then press the **REMOTE** key.



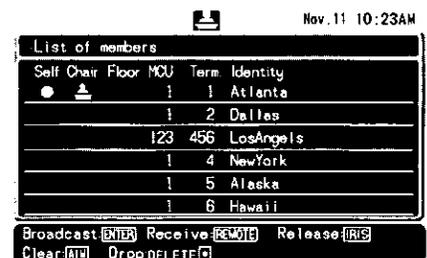
• Release

On the "List of Members" screen, use the  cursor keys to select the terminal that is to be released from video transmission or video reception, and then press the **IRIS** key.



• Clear

On the "List of Members" screen, press the **AIM** key.
* All speaking authority request icons are deleted.

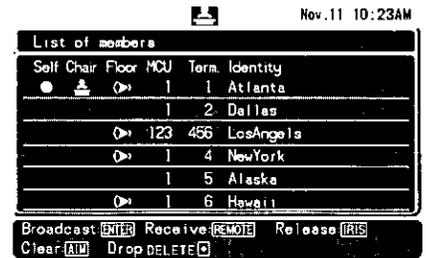


Multipoint Functions

• Drop

1. On the "List of Members" screen, use the cursor keys to select the terminal for which the video is to be disconnected, _____

* If the Chair selects his or her own terminal, the entire MCU conference is terminated.



Nov.11 10:23AM

Self	Chair	Floor	MCU	Term	Identity
●	▲	➤	1	1	Atlanta
			1	2	Dallas
➤		123	456		LosAngeles
➤		1		4	NewYork
			1	5	Alaska
➤		1		6	Hawaii

Broadcast ENTER Receive REMOTE Release IRIS
Clear AID Drop DELETE

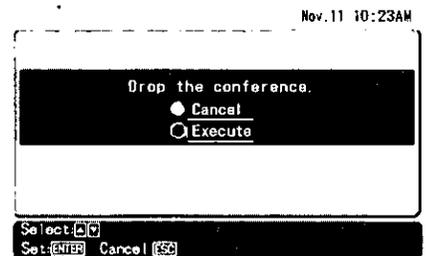
2. Press the (DELETE) key.

In the case of the Chair's own terminal :

The message "Drop the conference. : Cancel / Execute" is displayed.

In the case of another terminal :

The message "Drop the Terminal. : Cancel / Execute" is displayed.

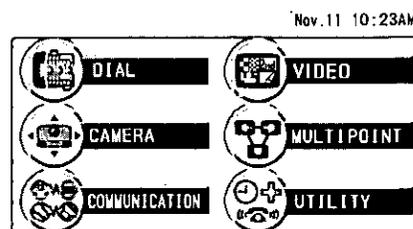


3. Select "Execute" using the cursor key, and then press the ENTER key.

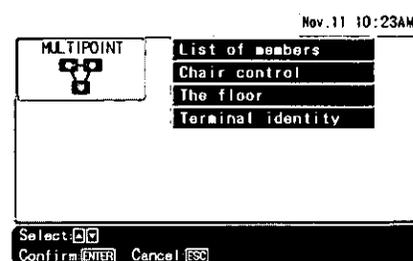
Chair Control

To request Chairperson control.

1. Press the **MENU** key.
 Select "MULTIPOINT" using the     cursor keys, and then press the **ENTER** key.



2. Select "Chair control" using the  cursor key, and then press the **ENTER** key.



3. Select "On" using the  cursor key, and then press the **ENTER** key.

* The Chair icon appears in the upper left corner of the screen.

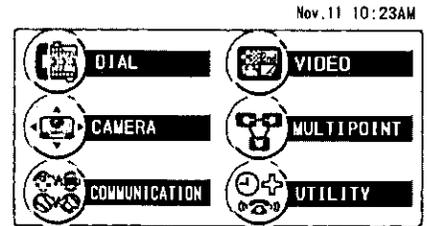


The Floor

To request the floor in an MCU conference.

1. Press the **MENU** key.

Select "MULTIPOINT" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



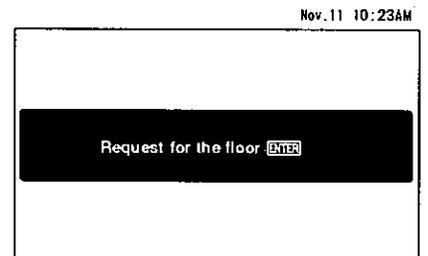
2. Select "The floor" using the **▼** cursor key, and then press the **ENTER** key.



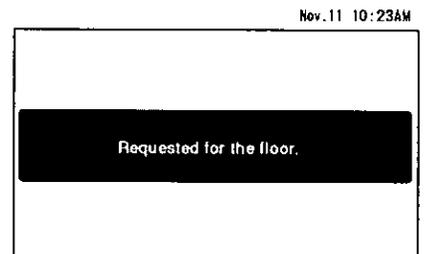
3. The message "Request for the floor Confirm : Enter" appears.

Press the **ENTER** key.

- "Requested for the floor" is displayed on the chair terminal.
- * Speaking authority request icon appears on the "List of Members" screen on Chair terminal.



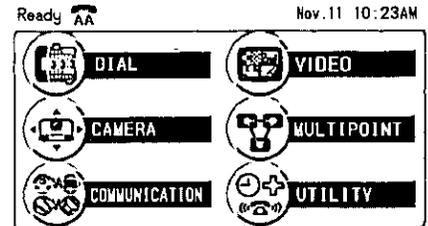
Chair terminal



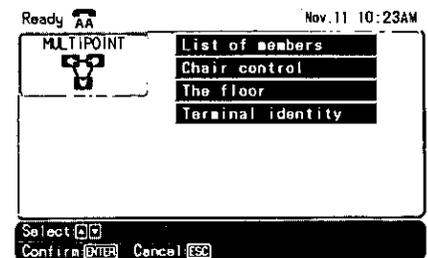
Terminal Identity

To set the terminal name.

1. Press the **MENU** key.
 Select "MULTIPOINT" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



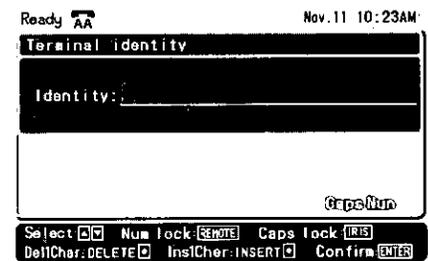
2. Select "Terminal identity" using the **▼** cursor key, and then press the **ENTER** key.



3. Use the Dial keys to enter the terminal name, and then press the **ENTER** key.

Up to 20 characters can be entered for a terminal name.

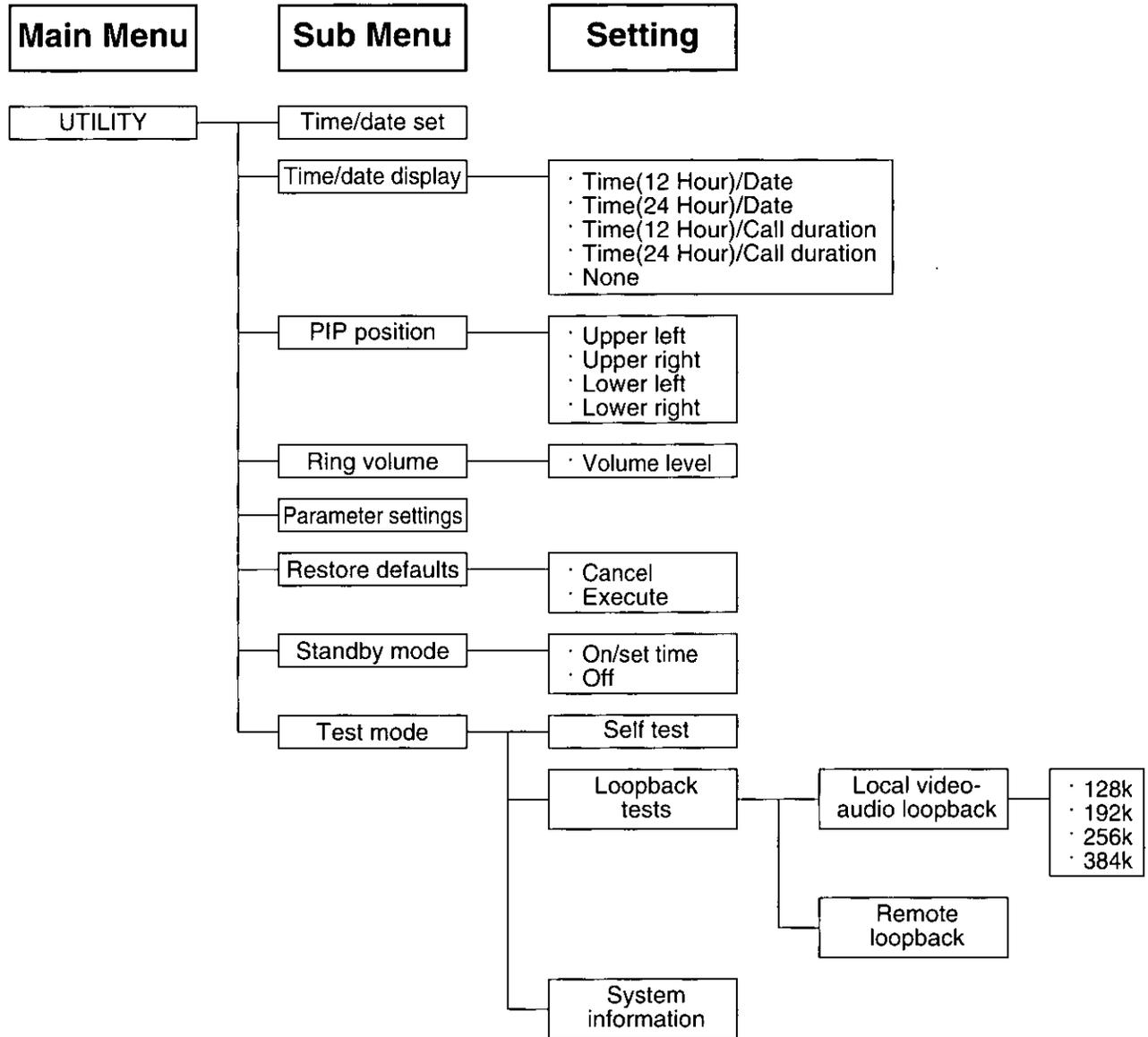
- Refer to the procedure for inputting characters. (See page 24)





Utility Functions

[Utility Menu List]



Time / Date Set

1. Press the **MENU** key.
 Select "UTILITY" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.

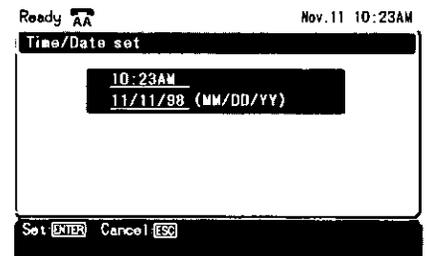
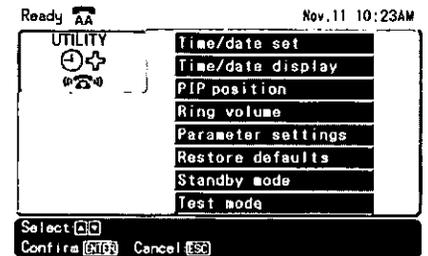
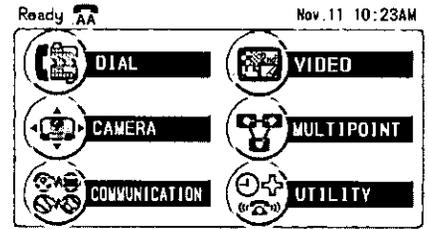
2. Select "Time/date set" using the **▼** cursor key, and then press the **ENTER** key.

3. Enter the time and date as follows:
 - 1) Move the cursor to each of the squares shown below.

0	5	:	5	0	AM
---	---	---	---	---	----

Character input area
Display selection area (AM ↔ PM)
 - 2) Use the **◀ ▶** keys to move the cursor to the item to be changed, and enter the numbers using the number keys.
 - 3) Press the **#** key to switch between "AM" and "PM".

4. To quit, press the **MENU** key.

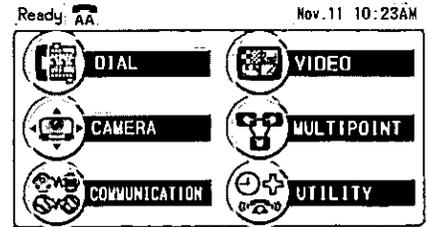


Time / Date Display

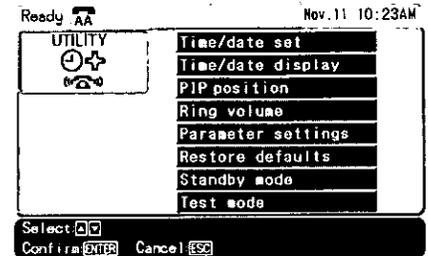
Time display mode.

- Time (12 Hour) / DateTime-Date
- Time (24 Hour) / DateTime-Date
- Time (12 Hour) / Call durationTime-Communication duration
- Time (24 Hour) / Call durationTime-Communication duration
- NoneNo display

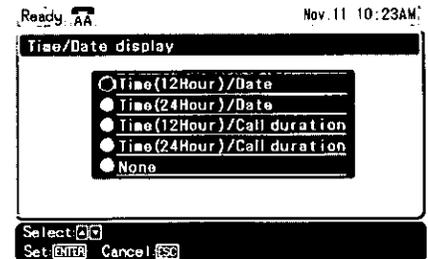
1. Press the **MENU** key.
Select "UTILITY" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



2. Select "Time/date display" using the **▼** cursor key, and then press the **ENTER** key.



3. Select the time display mode using the **▼** cursor key, and then press the **ENTER** key.



4. To quit, press the **MENU** key.

■ PIP (Picture In Picture) Position

Position where the PIP screen is to be displayed. (The PIP screen is displayed only while communications are in progress.)

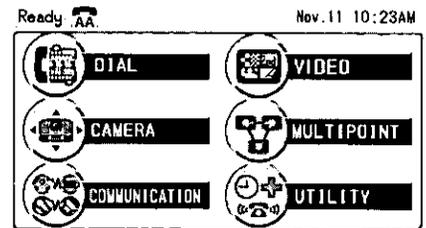
Upper leftThe PIP screen is displayed at the upper left.

Upper rightThe PIP screen is displayed at the upper right.

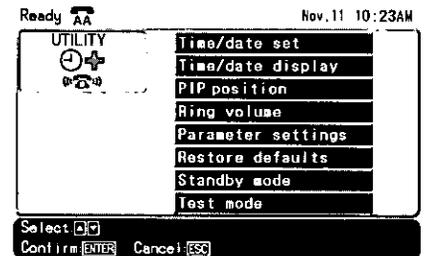
Lower leftThe PIP screen is displayed at the lower left.

Lower rightThe PIP screen is displayed at the lower right.

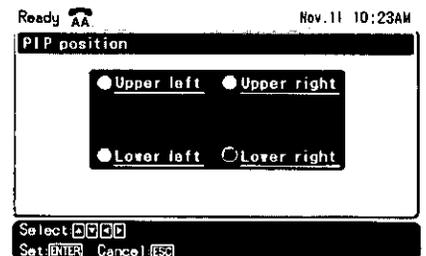
1. Press the **MENU** key.
Select "UTILITY" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



2. Select "PIP position" using the **▼** cursor key, and then press the **ENTER** key.



3. Select the screen position using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



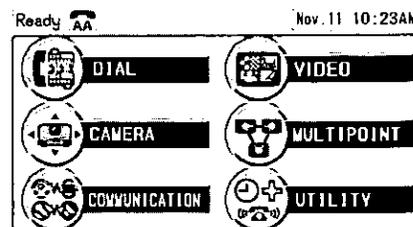
4. To quit, press the **MENU** key.

Ring Volume

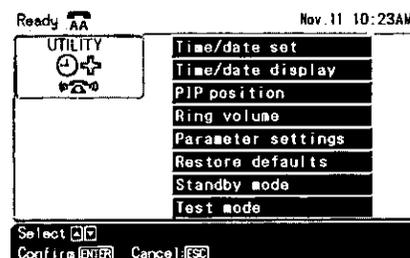
Ringer volume (0 to 3) which sounds when incoming calls are received.

1. Press the **MENU** key.

Select "UTILITY" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.

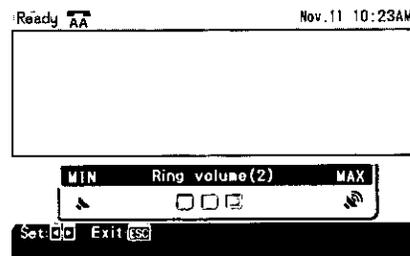


2. Select "Ring volume" using the **▼** cursor key, and then press the **ENTER** key.



3. Select the ringer volume using the **◀ ▶** cursor keys,

- The ringer will sound at the level which has been set when a call is received.

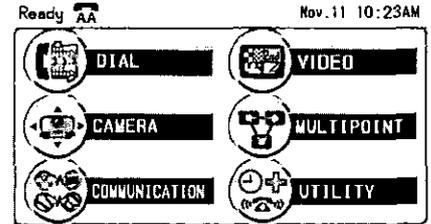


4. To quit, press the **MENU** key.

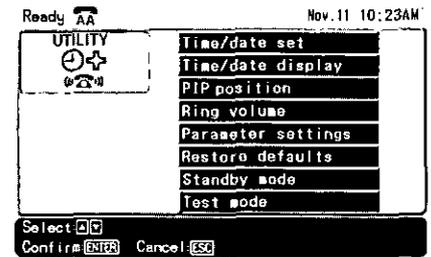
■ Parameter Settings

Current parameter settings are displayed.

1. Press the **MENU** key.
 Select "UTILITY" using the     cursor keys, and then press the **ENTER** key.

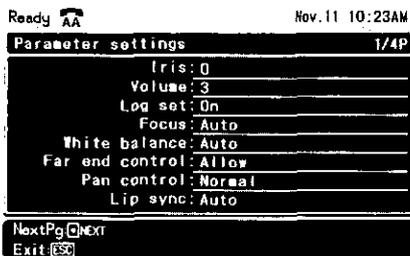


2. Select "Parameter settings" using the  cursor key, and then press the **ENTER** key.

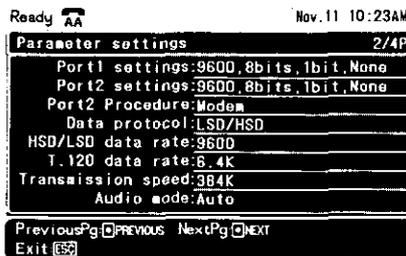


3. Select the page to be displayed.
 - Press the  (NEXT PAGE) key.
 - Press the  (PREVIOUS PAGE) key.

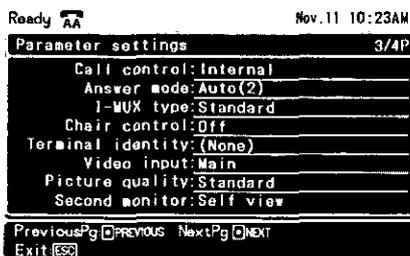
(Page 1)



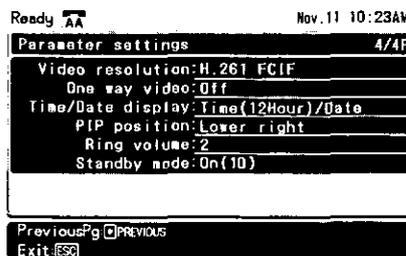
(Page 2)



(Page 3)



(Page 4)



4. To quit, press the **MENU** key.

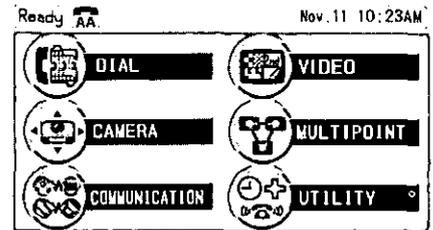
Restore Defaults

Restores the parameters to the factory (default) settings. (However, the registered directory, log, abbreviated dial, camera position memory, terminal identity, I-MUX other prefix, I-MUX other suffix and present time remain unchanged.)

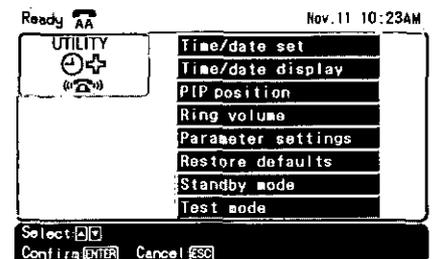
CancelThe factory (default) settings are not restored.

ExecuteThe factory (default) settings are restored.

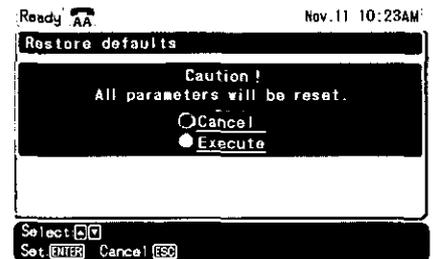
1. Press the **MENU** key.
Select "UTILITY" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



2. Select "Restore defaults" using the **▼** cursor key, and then press the **ENTER** key.



3. Select "Execute" to restore defaults using the **▼** cursor key, and then press the **ENTER** key.



4. To quit, press the **MENU** key.

■ Standby Mode

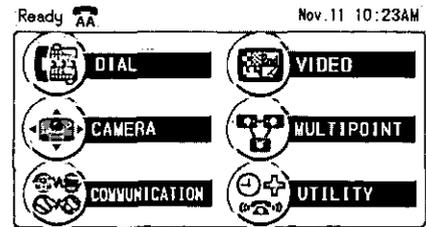
This sets the mode in which the monitor's power is turned off when no incoming calls are received or when no operations are performed.

OnThe monitor's power is turned off when no incoming call is received or operation is performed within time setting (01 to 59 minutes).

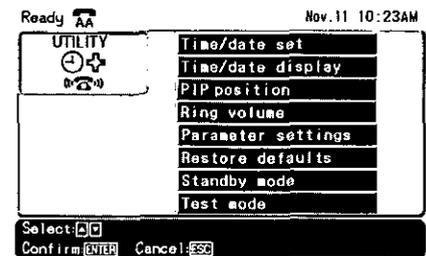
(This setting does not work during communication.)

OffThe monitor's power is not turned off.

1. Press the **MENU** key.
Select "UTILITY" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



2. Select "Standby mode" using the **▼** cursor key, and then press the **ENTER** key.



3. Select the item to be set using the **▼** cursor key.
 - When "On" has been selected :
Use the number keys (1 to 0) to input the time (01 to 59 minutes) which is allowed to elapse before the monitor's power is turned off.

Then press the **ENTER** key.



4. To quit, press the **MENU** key.

Note :

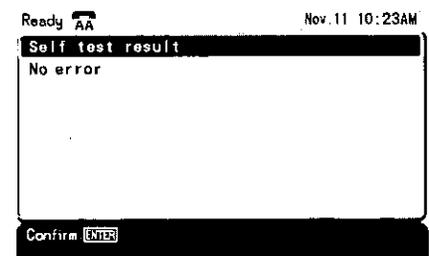
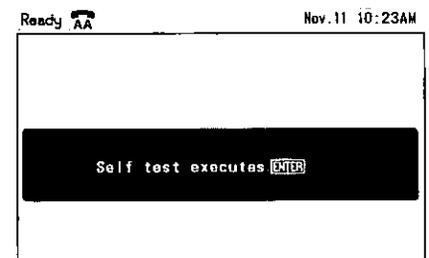
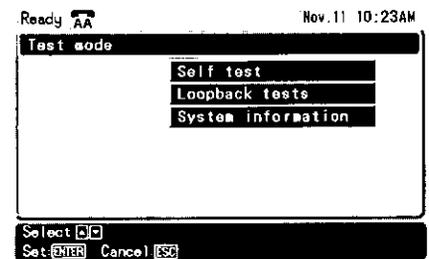
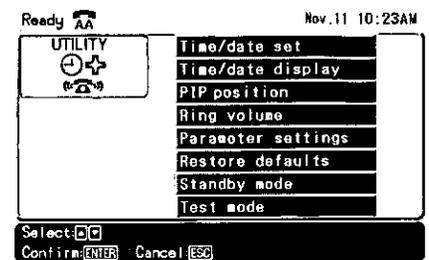
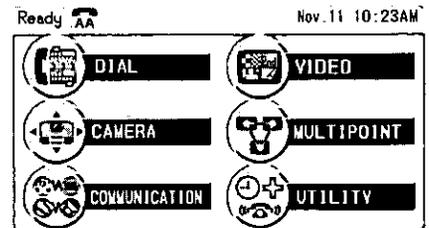
- This function will work only when the power outlet provided in the KXC-M7800 is used.
- The time is set in 1-minute increments.
- All settings are input by overwriting the existing settings.
- When the monitor's power is supplied from the AC outlet of the Codec, set "AUTO POWER" on the monitor to "SET."
- When the monitor's power is not going to be supplied from the AC outlet of the Codec, set "Standby Mode" on the codec to "OFF."

Test Mode

Self test

The self-diagnosis test is performed.

1. Press the **MENU** key.
Select "UTILITY" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.
2. Select "Test mode" using the **▼** cursor key, and then press the **ENTER** key.
3. Select "Self test" using the **▼** cursor key, and then press the **ENTER** key.
4. Press the **ENTER** key.
 - The "Executing self test" screen is displayed.
5. "Self test result" appears on the screen.
Press the **ENTER** key.
6. To quit, press the **MENU** key.



Note :

- If an error occurs, check the error message on page 123 and contact your dealer.

Utility Functions

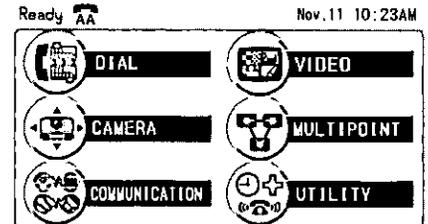
Loopback tests

● Local video-audio loopback

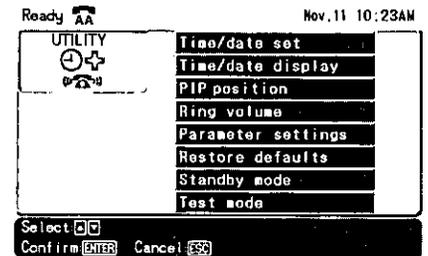
The local audio and video of your station, are processed through the codec and output to your monitor and speakers.

1. Press the **MENU** key.

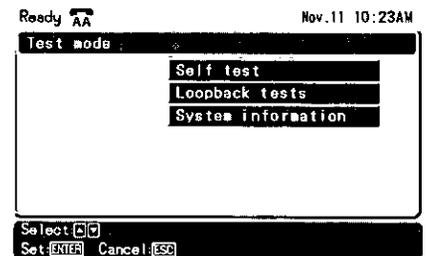
Select "UTILITY" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



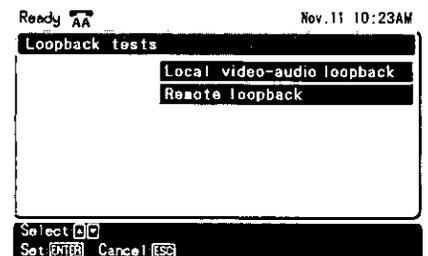
2. Select "Test mode" using the **▼** cursor key, and then press the **ENTER** key.



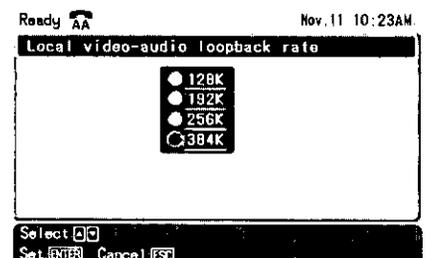
3. Select "Loopback tests" using the **▼** cursor key, and then press the **ENTER** key.



4. Select "Local video-audio loopback" using the **▼** cursor key, and then press the **ENTER** key.

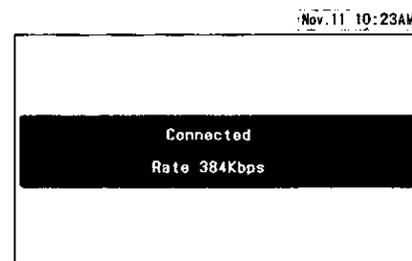


5. Select the Local video-audio loopback transmission speed using the **▼** cursor key, and then press the **ENTER** key.

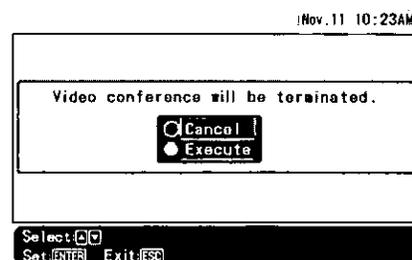


● The "Local loopback test executes" display now appears.

6. "Connected" will appear in the center of the screen and an image of the party called is displayed. Communication between the two parties will be enabled.

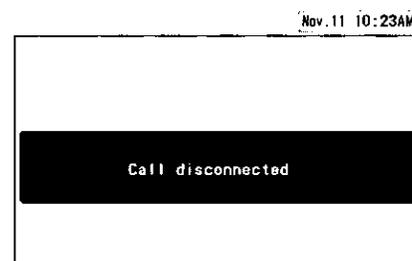


7. To terminate the transmission, press the **CALL** key.



8. Select "Execute" using the **▼** cursor key, and then press the **ENTER** key. "Call disconnected" appears on the screen, and the transmission is terminated.

- Far end control does not function during loopback.



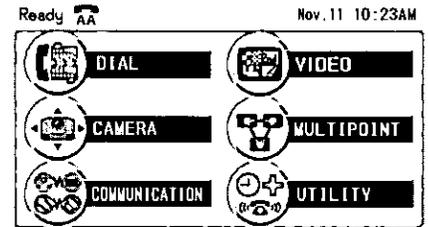
Utility Functions

• Remote loopback

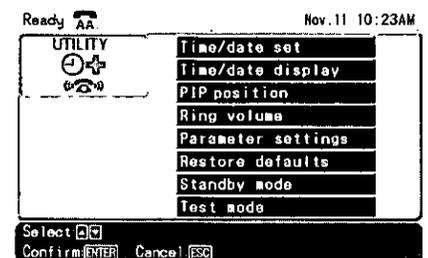
The remote loopback test requests the other party's system to retrieve data after passing it through the codec and back.

1. Press the **MENU** key.

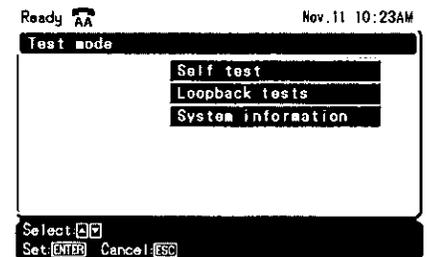
Select "UTILITY" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.



2. Select "Test mode" using the **▼** cursor key, and then press the **ENTER** key.

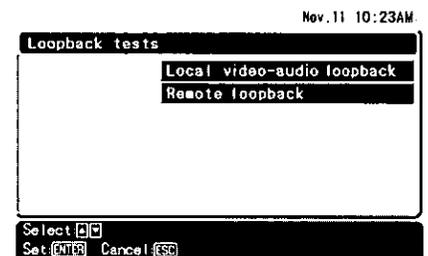


3. Select "Loopback tests" using the **▼** cursor key, and then press the **ENTER** key.



4. Select "Remote loopback" using the **▼** cursor key, and then press the **ENTER** key.

• Self image will be appears on the screen.



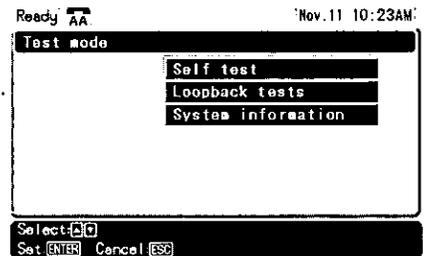
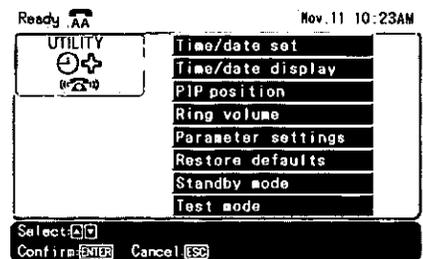
5. Perform the same operation again to cancel remote loopback.

- Far end control does not function during loopback.
- The PIP screen freezes at the remote loopback end.
- At the remote loopback end, the far end remote loopback cannot be performed.

System information

The system information is displayed.

1. Press the **MENU** key.
Select "UTILITY" using the **◀ ▶ ▲ ▼** cursor keys, and then press the **ENTER** key.
2. Select "Test mode" using the **▼** cursor key, and then press the **ENTER** key.
3. Select "System information" using the **▼** cursor key, and then press the **ENTER** key.



4. "System information" appears on the screen.

5. To quit, press the **MENU** key.

Glossary

Annex-D	High resolution still picture mode.
BRI	Basic Rate ISDN Transmission speed is $2 \times 64K$.
DTE	Data Terminal Equipment.
CSU	Channel Service Unit A device that interfaces between a communication network and data terminal equipment.
Fractional T1	Service that provides one or more 64 kbps channels of a T1 line.
G.711	A 64 kbps audio coding system (Include band with info).
G.722	A 7 kHz audio coding system under 64 kbps. (SB-ADPCM : Sub-band Adaptive Differential PCM)
G.728	A 16 kbps audio coding system.
H.221	A frame configuration of 64 kbps~1920 kbps channel on audio visual service.
H.242	A method to enable a communication between audio visual terminals using digital channel up to 2 Mbps.
H.261	A video coding system for $P \times 64$ kbps audio visual service.
H.263	The standard for video coding at low bit rates, based on H.261.
I-MUX	Inverse multiplexer I-MUX combine several BRI's to achieve high data rate.
ITU-T	International Telecommunication Union-Telecommunication Standardization Sector.
MCU	Multipoint Control Unit.
RS-366	Generic dialing Automatic Calling Unit (ACU) interface.
RS-449	An EIA standard for serial interfaces that extend distances and speeds beyond RS-232C.
T1	An AT&T term for a digital carrier facility used to transmit 1.544 Mbps. A T1 line can handle 24 voice or data channels at 64 kbps.
T.120	An ITU-T standard for data conference during video communication.
V.35	An ITU-T standard that combine the bandwidth of several telephone circuits to achieve high data rates.
X.21	An ITU-T standard for a circuit switching network.
H.243	A multipoint communication control protocol.

The List of AT Commands

Command	Parameter	Description	Remarks	Return code
+++	None	Enables AT command input from the data communication status.		No return value.
A/	None	Re-executes command which was last executed.	"AT" not required at head for this command only.	Return value is returned or not returned depending on command which was last executed.
ATDn	0~9, *, #, : Used to designate dialing numbers. P, T : Used to designate pulse or tone.	Dials designated dialing number, and connects the call. With Dual-channel dialing call origination, "," is inserted between the 1st. and 2nd. dialing numbers.	While the call is being connected: Data communication is started When the call is still to be connected: Video conference communication is started.	When the call has been connected: "CONNECT XXXX" (where "XXXX" is the baud rate) When connection of the call has failed: "NO CARRIER" With illegal code or command with too many characters: "ERROR"
ATA	None	Connects the calls in the answer mode.		When the call has been connected: "CONNECT XXXX" (where "XXXX" is the baud rate). When there is no communication: "NO CARRIER"
ATEn	0: No echoback 1: Echoback	Controls echoback of command.	Default value 1: Echoback	"ERROR" unless n=0,1 "OK" n=0,1
ATHn	0: Establishes on-hook (call disconnected) status.	Disconnects the call.	On-hook (call disconnected) status established permanently.	When called is disconnected: "OK" When an error occurs: "ERROR"
AT&Kn	3: Hardware flow control using RS/CS Sets the flow control method.	3: Hardware flow control using RS/CS established permanently.		"OK" When an error occurs: "ERROR"

The List of AT Commands

Command	Parameter	Description	Remarks	Return code
AT0n	0, 1: Communication status restoration	Restores communication on-line (= data communication) status.		"OK" When an error occurs: "ERROR"
ATQn	0: Response message displayed 1: Response message not displayed	Sets whether the response message is to be displayed.	Default value 0: Response message displayed	"OK" When an error occurs: "ERROR"
ATSn	S0: Number of rings (0 to 9) until calls are automatically answered. S2: Escape code (0 to 127) S3: Return code (0 to 127) S4: Line feed code (0-127)	Sets or references register value. XX?: Register XX setting is displayed. XX=YY: Parameter YY is set in register XX.	S0: Default value = 0 (automatic answering canceled) S2: Default value = 43 (+) (automatic answering canceled) S3: Default value = 13(CR) S4: Default value = 10(LF)	S0 : "000" S2 : "043" S3 : "013" S4 : "010"
ATSn	S5: Backspace code (0 to 127) S12: Guard time before and after escape command (0 to 255, increments of 20ms) S25: ER signal detection time (0 to 255, increments of 20ms) S30: Timeout time (0 to 255, increments of 100ms) S32: XON code (0 to 127) S33: XOFF code (0 to 127)	Enables AT command input from the data communication status.	S5: Default value = 8 (BS) S12: Default value=10(BS) S25: Default value=10(BS) Not used S30:Default value=0(BS) Not used S32:Default value=17(BS) Not used S33:Default value=19(BS) Not used	S5 : "008" S12 : "010" S25 : "010" S30 : "000" S32 : "017" S33 : "019"

The List of AT Commands

Command	Parameter	Description	Remarks	Return code
ATVn	0: Response messages displayed in code 1: Response messages appear as regular displays.	Sets the response message format.	Default value 1: Response messages appear as regular displays.	"OK" "ERROR" unless n=0,1
ATXn	0: "CONNECT" is displayed when data transmission enable status is established. 1: "CONNECT XXXX" is displayed when data transmission enable status is established; "XXXX" is current transmission speed. 2: See above 3: See above 4: See above	Designates extended response message format.	Default value 0: "CONNECT" is displayed when data transmission enable status is established.	"OK" "ERROR" unless n=0~4
ATZn	None	Resets command / register.		"OK"
AT< VERUP	None	Starts operation to upgrade the software program.	KXC-M7800 is reset and rebooted automatically as soon as the operation to upgrade the software program is completed.	"OK" KXC-M7800 built-in flash ROM programming utility, Ver. 1.00 Copyright (C) 1999, Kyushu Matsushita Electric Co., Ltd. Start program upload using XMODEM (CRC) Protocol CCCC

Data Communication Available Data Rate

● Available data rate

The table below gives the baud rates for data transmission. Depending on the audio mode and transmission speed settings during communication, it may not be possible to use some values.

LSD/HSD

Audio Mode	Transmission Speed	available data rate						
		300	1200	4800	9600	14.4K	32K	64K
G.728	56K, 64k	○	○	○	○	○	○	N/A
	2×56k, 2×64k 112k, 128k, 168k, 192k 224k, 256k, 280k, 320k, 336k, 384k	○	○	○	○	○	○	○
G.722, 48k	64K	○	○	○	○	○	N/A	N/A
	2×64k, 128k, 192k, 256k, 320k, 384k	○	○	○	○	○	○	○
	56K	○	○	○	N/A	N/A	N/A	N/A
	2×56k, 112k, 168k, 224k, 280k, 336k	○	○	○	N/A	N/A	○	○
G.722, 56k, G.711	56k, 64k	○	○	○	N/A	N/A	N/A	N/A
	2×56k, 112k, 168k, 192k, 224k, 256k, 280k, 320k, 336k, 384k	○	○	○	N/A	N/A	○	○
	2×64k, 128k	○	○	○	N/A	N/A	N/A	○

T. 120

Audio Mode	Transmission Speed	available data rate				
		6.4K	14.4K	24K	62.4K	64K
G.728	56K, 64k	○	○	○	N/A	N/A
	2×56k, 2×64k 112k, 128k, 168k, 192k 224k, 256k, 280k, 320k, 336k, 384k	○	○	○	○	○
G.722, 48k	64K	○	○	N/A	N/A	N/A
	2×64k, 128k, 192k, 256k, 320k, 384k	○	○	N/A	○	○
	56K	○	N/A	N/A	N/A	N/A
	2×56k, 112k, 168k, 224k, 280k, 336k	○	N/A	N/A	○	○
G.722, 56k, G.711	56k, 64k	○	N/A	N/A	N/A	N/A
	2×56k, 2×64k, 112k, 128k, 168k, 192k, 224k, 256k, 280k, 320k, 336k, 384k	○	N/A	N/A	○	○

Note :

- The audio mode and transmission speed settings are the actual values used for communication and may differ from the menu settings. These actual values can be referenced on the communication status sub menu of the communication menu.

Troubleshooting

Symptom	Possible Cause	Remedy
The power supply does not turn on.	The power supply breaker is off.	Turn the breaker on and switch on the codec.
	The AC socket is unplugged.	Plug in the AC socket properly.
	The power supply for the codec is off.	Turn the power supply for the main unit on.
"Ready" does not appear on the monitor.	The power supply for the monitor is off.	Turn the power supply for the monitor on.
	The Monitor 2 output signal is connected to the monitor.	Connect the Monitor 1 output signal to the monitor.
The wireless remote controller does not work.	There are no batteries in the wireless remote controller, or the batteries have run out.	Insert two AA (R6 or LR6) batteries properly.
	The infrared beam from the remote controller is not striking the remote controller sensor of the camera properly.	Aim the wireless remote controller directly at the remote controller sensor of the camera.
	The power supply switch of the camera is off.	Turn on the switch of the camera.
Your room does not show up clearly on the monitor.	The lighting in the room is not adjusted properly.	Change the camera location.
	The subject is backlight.	Change the camera location so that the subject is not backlight.
The line does not connect.	The modular jack is not connected properly.	Insert the modular jack until a "click" is heard.
	The line connection cable is not connected properly.	Connect the cable properly.
	Other equipment is connected on the same line.	Disconnect any other equipment which may be connected.
	The correct dial number has not been entered.	Check the number of the desired party and dial the number again.
	The unit is in manual reception mode.	Press the CALL key.
The other party's picture does not appear on the monitor after the line is connected.	The power supply of the other party's unit is off.	Terminate the connection, check the power supply of the other party's unit, and redial the number.
	The communication modes at the two ends do not match.	Terminate the connection, check the mode of the other party's unit, and redial the number.
There is no sound from the other party after the line is connected.	The other party's audio MUTE key is on.	Press MUTE key to release mute at the other party.
	The audio volume of your unit is low.	Adjust the volume to the proper level.
	The audio monitor have not been connected.	Connect the audio monitor.
A still picture appears on the monitor.	The unit is in the freeze mode.	Release the freeze mode.
The audio from the other party is received but there is no picture.	Codec is in audio only mode at 56/64Kbps transmission speed.	Change the audio mode to G.728 or change the transmission speed higher.
	The visual communication modes at the two ends do not match.	Terminate the connection, check the modes at both ends, and redial the number.

Error Messages

■ Errors Caused by Menu Settings

Directory is full.	The maximum number of directories that can be registered is 100. Delete unnecessary directories and then register the new one.
No directory list	Register a directory.
Please input the number.	Input the number in a directory or in an auto dial number.
No log list	If a log list is needed, turn on "Log list".
No auto dial	Register an auto dial number.
Chair control is not available.	Terminate Chair Control and then try again.
Release of chairperson is not available.	The Chairperson authority has already been released.
Changing data communication is not available.	Terminate data communications and then try again.
Time or Date setting error	Set the correct time and date.
No received graphics	No graphics were received. Have the other party send the graphics again.
No stored graphics	No graphics were sent. Send the graphics again.
One way video is not available.	Confirm that the other party is using the same type of terminal.

■ Operating Errors

Far end control is blocked.	Set the "Far end control" menu item for the other party's terminal to "allow".
Far end control failed.	Set the "Far end control" menu item for the other party's terminal to "allow".
Camera cable is not connected.	Connect the KXC-CM780 Camera Cable to the KXC-M7800 unit.
Making an internal call is not available.	Set the "Call control" menu item to "Internal".
Waiting setting response	Make the setting again.
Duplicate call error	Terminate communications and then perform video communications again.
Setting value is invalid.	After checking the setting, set the menu again.
No setting response	Set the menu again.
Video processor error	After turning the power on again, perform video communications again.
Audio DSP error	Perform video communications again.
Ch1 sync error	
Ch2 sync error	Perform video communications again.
This control is not available.	This function cannot be used in the current mode.
Chairperson is released by MCU.	The MCU released the Chairperson authority.
Broadcast video is not available.	
Self broadcast video is not available.	Terminate Chair Control and then try again.
Receiving video is not available.	
There is no chairperson.	Request Chair Control and then try again.
No video to release	Broadcast / Receiving video has been not selected.
MCU does not support this function	MCU does not support this function
Waiting Setting response	Make the setting again.
The CSU is not ready.	Confirm that the CSU is starting up in the ready state. Turn the CSU power on again.
Transmission time-out	Check the CSU setting and then call again.
The CSU is cut off during transmission.	Check the number and then call again.
Reception time-out	Check the CSU setting.
The CSU is cut off during reception.	Check the CSU setting.
CSU cable connection error	Check the cable connection between the KXC-M7800 and the CSU.
Not available under Aux camera control.	Set Camera Select on the remote controller to MAIN.
No 1st channel number	Input the dial number for the first channel and then call again.
No video conference connection	Try again after making the video conference connection.
Video conference connection time-out	Perform video communication again.

Error Messages

No Main video signal	Input the video to the main camera video input connector.
No Aux video signal	Input the video to the auxiliary camera video input connector.
No VCR video signal	Input the video to the VCR video input connector.
No Document video signal	Input the video to the document camera video input connector.
No S-Video video signal	Input the video to the S-Video input connector.
Rate is not available.	Change the data rate and try again.
Remote does not support this data rate.	Use a data speed that the other party supports.
Open user data error	Close the user data and then open it again.
Already use user data	Close the user data that is in use and then try again.
Port1 cannot be used.	Use port 2.
Fail to send graphics	Send the graphics again.
Fail to receive graphics	Have the other party send the graphics again.
Graphics is not valid under H.263.	Set the video resolution to H.261CIF and then try again.
Graphics is not valid under QCIF.	Set the video resolution to H.261CIF and then try again.

■ Self-test Messages

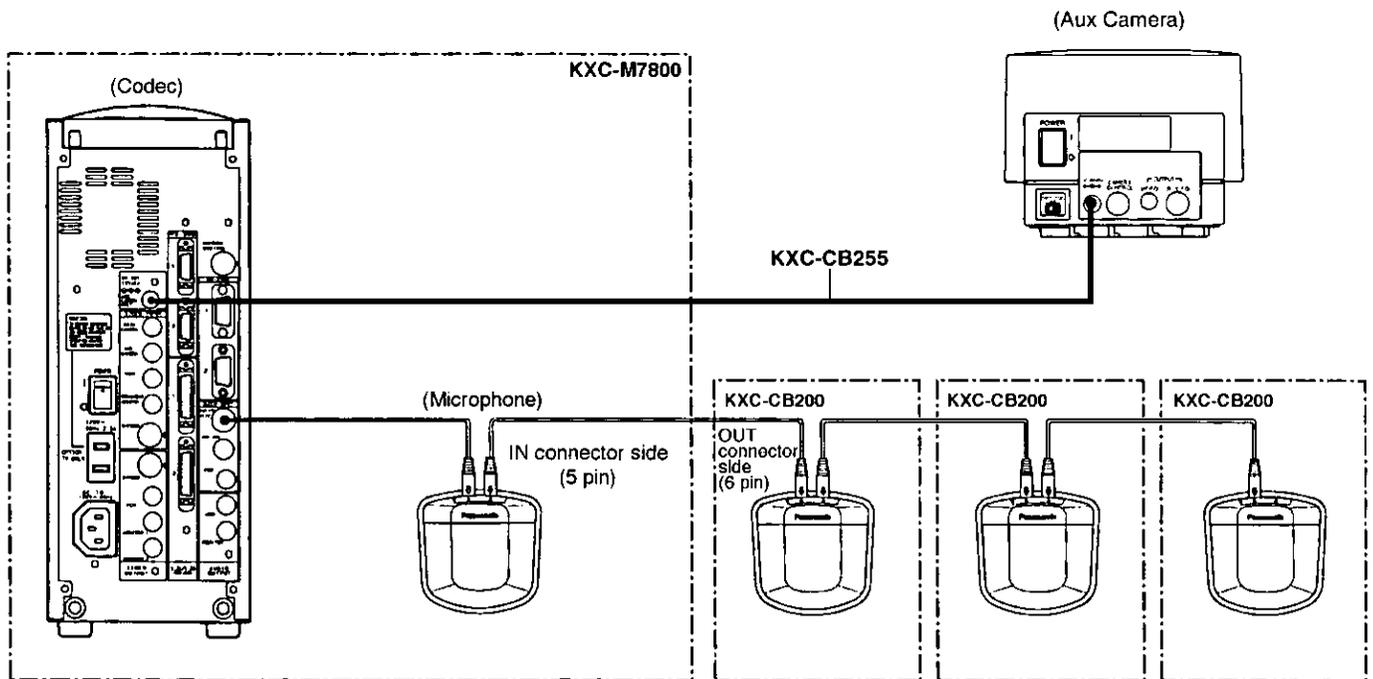
101 CPU error	Contact your sales representative.
102 RAM error	
103 RAM error	
104 Clock controller error	
105 Serial controller error	
106 Serial controller error	
107 No battery	
108 Register error	
109 Register error	
10A Audio processor error	
10B Audio processor error	
200 Register error	
201 Register error	
202 Video processor error	
203 SRAM error	
204 SRAM error	
205 SRAM error	
206 SRAM error	
207 DRAM error	
208 DRAM error	
209 Video decoder error	
20A Video decoder error	
20B Video encoder error	
20C Video encoder error	
20D Message controller error	
20F Message controller error	
301 No CSU cable connection	
302 No main camera cable connection	Check the cable connection between the KXC-M7800 and the KXC-CM780.
303 No Main video signal	Input the video to the main camera video input connector.
304 No Aux video signal	Input the video to the auxiliary camera video input connector.
305 No VCR video signal	Input the video to the VCR video input connector.
306 No Document video signal	Input the video to the document camera video input connector.
307 No S-Video video signal	Input the video to the S-Video input connector.

Separately Sold Accessory List

Contact your dealer to order these accessories.

Product Name	Model No.	Use
Microphone Unit	KXC-CB200	Additional microphone (see connection diagram below)
RS-366 Cable	KXC-CB251	Connector cable (see pages 4 and 5 of Installation Manual)
V.35 Cable	KXC-CB252	Connector cable (see pages 4 and 5 of Installation Manual)
RS-449 Cable	KXC-CB253	Connector cable (see pages 4 and 5 of Installation Manual)
X.21 Cable	KXC-CB254	Connector cable (see pages 4 and 5 of Installation Manual)
Camera DC Power Cable	KXC-CB255	DC power supply for auxiliary camera (see connection diagram below)

Connection diagram for separately sold accessories



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Panasonic Consumer Electronics Company, Division
of Matsushita Electric Corporation of America
One Panasonic Way Secaucus, New Jersey 07094

Panasonic Sales Company
Division of Matsushita Electric of
Puerto Rico, Inc.
Ave. 65 de Infanteria, Km. 9.5, San Gabriel Industrial
Park, Carolina, Puerto Rico 00985

PANASONIC

Video Teleconferencing System (VTS) Products Limited Warranty

Panasonic Consumer Electronics Company or Panasonic Sales Company (collectively referred to as "the warrantor") will repair this product with new or refurbished parts, free of charge, in the USA or Puerto Rico for one (1) year from the date of original purchase in the event of a defect in materials or workmanship.

This Limited Warranty Excludes both Labor and Parts for : batteries, and cosmetic parts (cabinet).

Carry-in or mail-in service in the USA or Puerto Rico can be obtained during the warranty period by contacting a Panasonic Services Company (PASC) Factory Servicenter listed in the Servicenter Directory. Or call, toll free, 1-800-211-7262 to locate a PASC authorized Servicenter. Carry-in or mail-in service in Puerto Rico can be obtained during the warranty period by calling the Panasonic Sales Company telephone number listed in the Servicenter Directory.

This warranty is extended only to the original purchaser. A purchase receipt or other proof of date of original purchase will be required before warranty service is rendered.

This warranty only covers failures due to defects in materials and workmanship which occur during normal use. The warranty does not cover damages which occur in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accident, misuse, abuse, neglect, mishandling, faulty installation, misapplication, set-up adjustments, improper operation or maintenance, alteration, modification, introduction of sand, humidity or liquids, power line surge, improper voltage supply, lightning damage, signal reception problems, or service by anyone other than a PASC Factory Servicenter or a PASC authorized Servicenter, or damage that is attributable to acts of God.

LIMITS AND EXCLUSIONS

There are no express warranties except as listed above.

THE WARRANTOR SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the Customer Satisfaction Center at the company address indicated above.

Service Directory

Panasonic

For Product Information, Operating Assistance, Literature Request, Dealer Locations, and all Customer inquiries please contact :
800-211-PANA (7262), Monday-Friday 9am-9pm Saturday-Sunday 9am-7pm EST.

Web Site : [http : //WWW. Panasonic.com](http://WWW.Panasonic.com)
You can purchase parts, accessories or locate your nearest servicenter by visiting our Web Site.

Product Repairs

***Panasonic Services Company
Factory Servicenter***

8655 Roswell Road, Suite 200
Atlanta, GA 30350

Service in Puerto Rico

**Matsushita Electric of Puerto Rico, Inc. Panasonic Sales Company / Factory
Servicenter :**

**Ave. 65 de Infanteria, Km. 9.5, San Gabriel Industrial Park, Carolina, Puerto Rico 00985
Phone (787) 750-4300 Fax (787)768-2910**

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